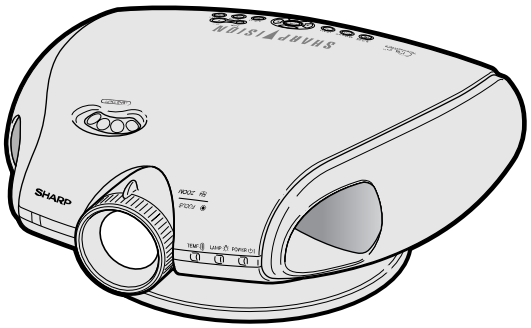
SHARP SERVICE MANUAL
SERVICE-ANLEITUNG

S13V7XV-Z90E/



THEATER PROJECTOR
THEATER PROJEKTOR

MODELS
MODELLE

XV-Z90E
XV-Z91E

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

Im Interesse der Benutzersicherheit (erforderliche Sicherheitsregeln in einigen Ländern) muß das Gerät in seinen Originalzustand gebracht werden. Außerdem dürfen für die spezifizierten Bauteile nur identische Teile verwendet werden.

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SHARP CORPORATION

Specifications

Product type	Theater Projector
Model	XV-Z90E, XV-Z91E
Video system	PAL/PAL 60/PAL-M/PAL-N/SECAM/NTSC 3.58/NTSC 4.43/DTV 480i/480P/720P/1080i
Display method	DLP chip, RGB optical shutter method
DLP panel	Panel size: 0.55” (140mm) Display method: Single Panel Digital Micromirror Device (DMD™) by Texas Instruments Drive method: Digital Light Processing (DLP™) No. of dots: 480,000 dots (800 [H] x 600 [V])
Lens	1–1.2 x zoom lens, F1.75-2.04, f=28–33.5mm (XV-Z90E), F2-2.4, f=16.9–20.2mm (XV-Z91E),
Projection lamp	DC150 W SHP lamp
Video input signal	RCA Connector: VIDEO (INPUT 4), composite video, 1.0 Vp-p, sync negative, 75 Ω terminated
S-video input signal	4-pin Mini DIN connector (INPUT 3) Y (luminance signal): 1.0 Vp-p, sync negative, 75 Ω terminated C (chrominance signal): Burst 0.286 Vp-p, 75 Ω terminated
Component input signal (INPUT 1)	RCA Connector Y: 1.0 Vp-p, sync negative, 75 Ω terminated P_B: 0.7 Vp-p, 75 Ω terminated P_R: 0.7 Vp-p, 75 Ω terminated
Component input signal (INPUT 2)	15-pin D-Sub connector Analog 0.7 Vp-p 75 Ω Y: 1.0 Vp-p, sync negative, 75 Ω terminated P_B: 0.7 Vp-p, 75 Ω terminated P_R: 0.7 Vp-p, 75 Ω terminated
Component RGB input signal (INPUT 2)	15-pin D-Sub connector RGB separate/sync on green type analog input: 0–0.7 Vp-p, positive, 75 Ω terminated HORIZONTAL SYNC. SIGNAL: TTL level (positive/negative) VERTICAL SYNC. SIGNAL: Same as above
Horizontal resolution	520 TV lines (NTSC 3.58 input)
RGB input signal	15-PIN MINI D-SUB CONNECTOR (INPUT 2): RGB separate/composite sync/sync on green type analog input: 0–0.7 Vp-p, positive,75 Ω terminated HORIZONTAL SYNC. SIGNAL: TTL level (positive/negative) or composite sync (Apple only) VERTICAL SYNC. SIGNAL: Same as above
Pixel clock	12–110 MHz
Vertical frequency	43–75 Hz
Horizontal frequency	15–70 kHz
Computer control signal	9-pin D-sub connector (RS-232C Port)
Rated voltage	AC 100–240 V
Input current	2.1 A
Rated frequency	50/60 Hz
Power consumption	200 W
Heat dissipation	750 BTU/hour
Operating temperature	+5°C to +35°C
Storage temperature	– 20°C to +60°C
Cabinet	Plastic
I/R carrier frequency	38 kHz
Dimensions (approx.)	368(W) x 153.8(H) x 327(D) mm (including swivel stand) 368(W) x 118(H) x 327(D) mm (main body only)
Weight (approx.)	4.3 kg (including swivel stand) 3.8 kg (main body only)
Supplied accessories	Remote control, Two AA size batteries, Power cord, Computer RGB cable, 21 pin RCAconversion adaptor, Video cable, Terminal cover, Screws for terminal cover, Lens cap (attached on the body), Lens cap strap, Operation manual
Replacement parts	Lamp unit (Lamp/cage module) (BQC-XVZ90+++1), Remote control (RRMCGA099WJSA), AA size batteries, Power cord for Europe except U.K. (QACCV4002CEZZ), Power cord for U.K., Hong Kong and Singapore (QACCBA012WJPZ), Power cord for Australia and New Zealand (QACCL3022CEZZ), Computer RGB cable (QCNW-5050CEZZ), 21 pin RCA conversion adaptor (QSOCZ0361CEZZ), Video cable (QCNWGA001WJZZ), Terminal cover (GCOVAA116WJKA), Screws for terminal cover (XBBSN40P10000), Lens cap (CCAPHA004WJ01), Lens cap strap (UBNDT0013CEZZ), Operation manuals; for European 7 languages (TINS-A326WJZZ) / for Chinese, Korean and Arabic (TINSA327WJZZ)

This SHARP projector uses a DMD chip. This very sophisticated chip contains 480,000 pixels. As with any high technology electronicequipment such as large screen TVs, video systems and videocameras, there are certain acceptable tolerances that the equipment must conform to.

Specifications are subject to change without notice.

NOTE TO SERVICE PERSONNEL

UV-RADIATION PRECAUTION

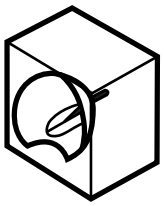
The light source, metal halide lamp, in the projector emits small amounts of UV-Radiation.

AVOID DIRECT EYE AND SKIN EXPOSURE.

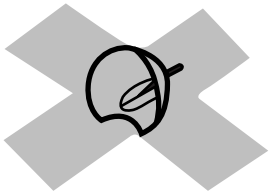
To ensure safety please adhere to the following:

1. Be sure to wear sun-glasses when servicing the projector with the lamp turned “on” and the top enclosure removed.

2. Do not operate the lamp outside of the lamp housing.



3. Do not operate for more than 2 hours with the enclosure removed.



UV-Radiation and Medium Pressure Lamp Precautions

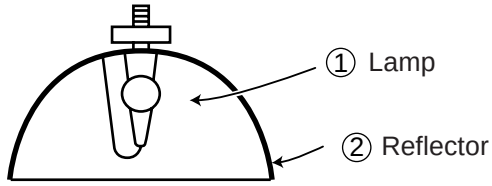
1. Be sure to disconnect the AC plug when replacing the lamp.
2. Allow one hour for the unit to cool down before servicing.
3. Replace only with same type lamp. Type BQC-XVZ90+++1 rated 370V/150W.
4. The lamp emits small amounts of UV-Radiation, avoid direct-eye contact.
5. The medium pressure lamp involves a risk of explosion. Be sure to follow installation instructions described below and handle the lamp with care.

■ Lamp Replacement

Note:

Since the lamp reaches a very high temperature during units operation replacement of the lamp should be done at least one hour after the power has been turned off. (to allow the lamp to cool off.) Installing the new lamp, make sure not to touch the lamp (bulb) replace the lamp by holding its reflector ②.

[Use original replacement only.]



DANGER ! — Never turn the power on without the lamp to avoid electric-shock or damage of the devices since the stabilizer generates high voltages at its start.

Since small amounts of UV-Radiation are emitted from an opening between the duct cover and the lamp housing, it is recommended to place the LENS CAP on the opening during servicing to avoid eye and skin exposure.

Note: Please obtain a lens cap before servicing a models XV-Z90E/XV-Z91E that is received without one.

Precautions for using lead-free solder

1 Employing lead-free solder

"Front-R/C, LED, Terminal1, Terminal 2,Rear-R/C and key PWBs" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.

Example:

Indicates lead-free solder of tin, silver and copper.

2 Using lead-free wire solder

When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.

As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40°C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldening bit, contact our service station or service ranch in your area.

3 Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is about 220°C which is higher than the conventional lead solder by 40°C, and as it has poor solder wettabillty, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be excoeded, remove the bit from the PWB as soon as you conurm the steady soldering condition.

Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to tum on and off the power of the bit as required.

if a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.

When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

Becareful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing

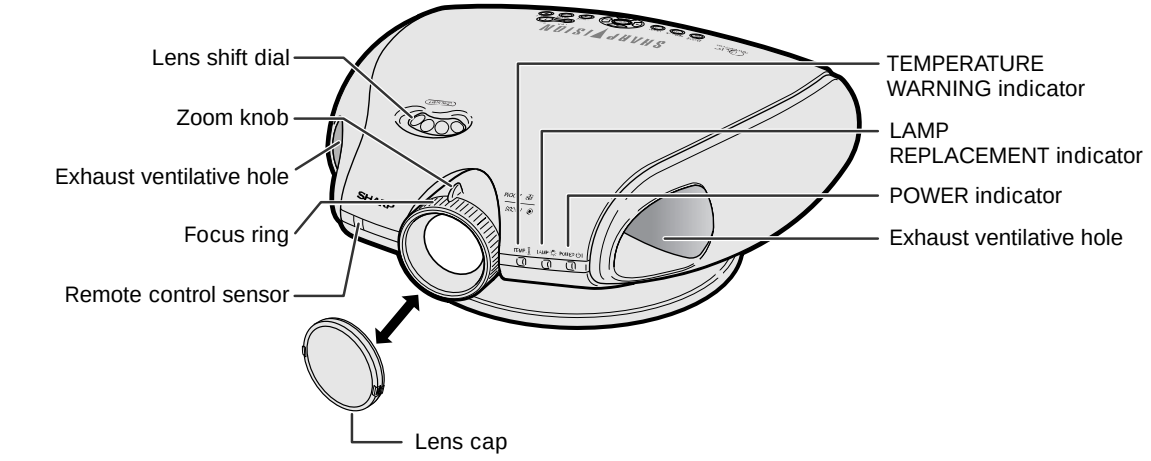
Part No.	★	Description		Code
ZHNDAi123250E	J	ϕ0.3mm	250g(1roll)	BL
ZHNDAi126500E	J	ϕ0.6mm	500g(1roll)	BK
ZHNDAi12801KE	J	ϕ1.0mm	1kg(1roll)	BM

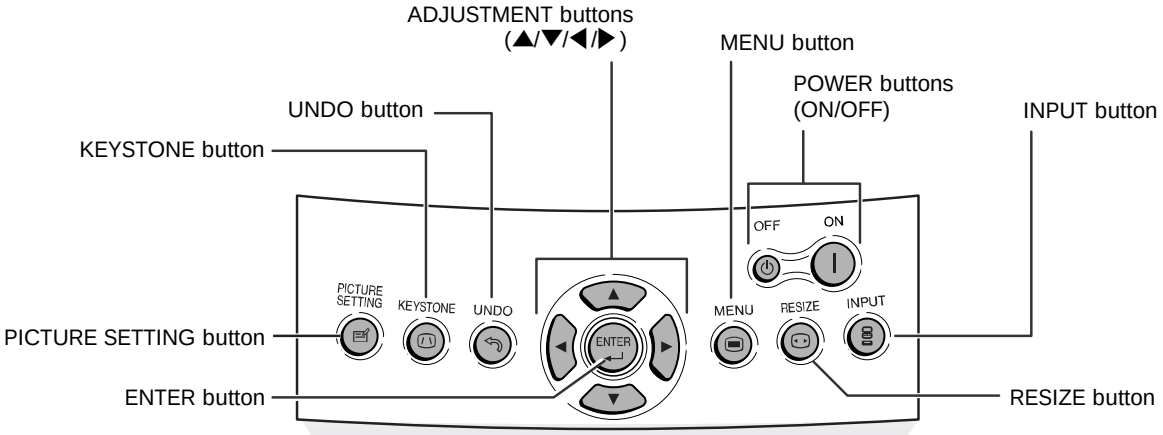
OPERATION MANUAL

Location of Controls

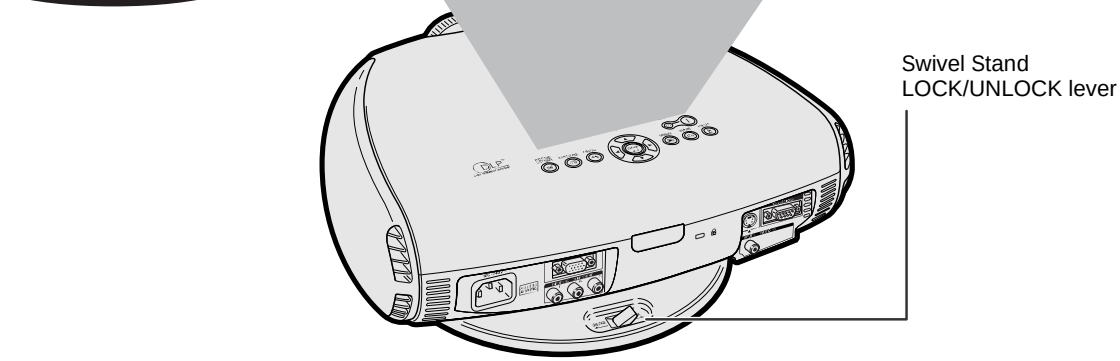
Projector

Front and Top View



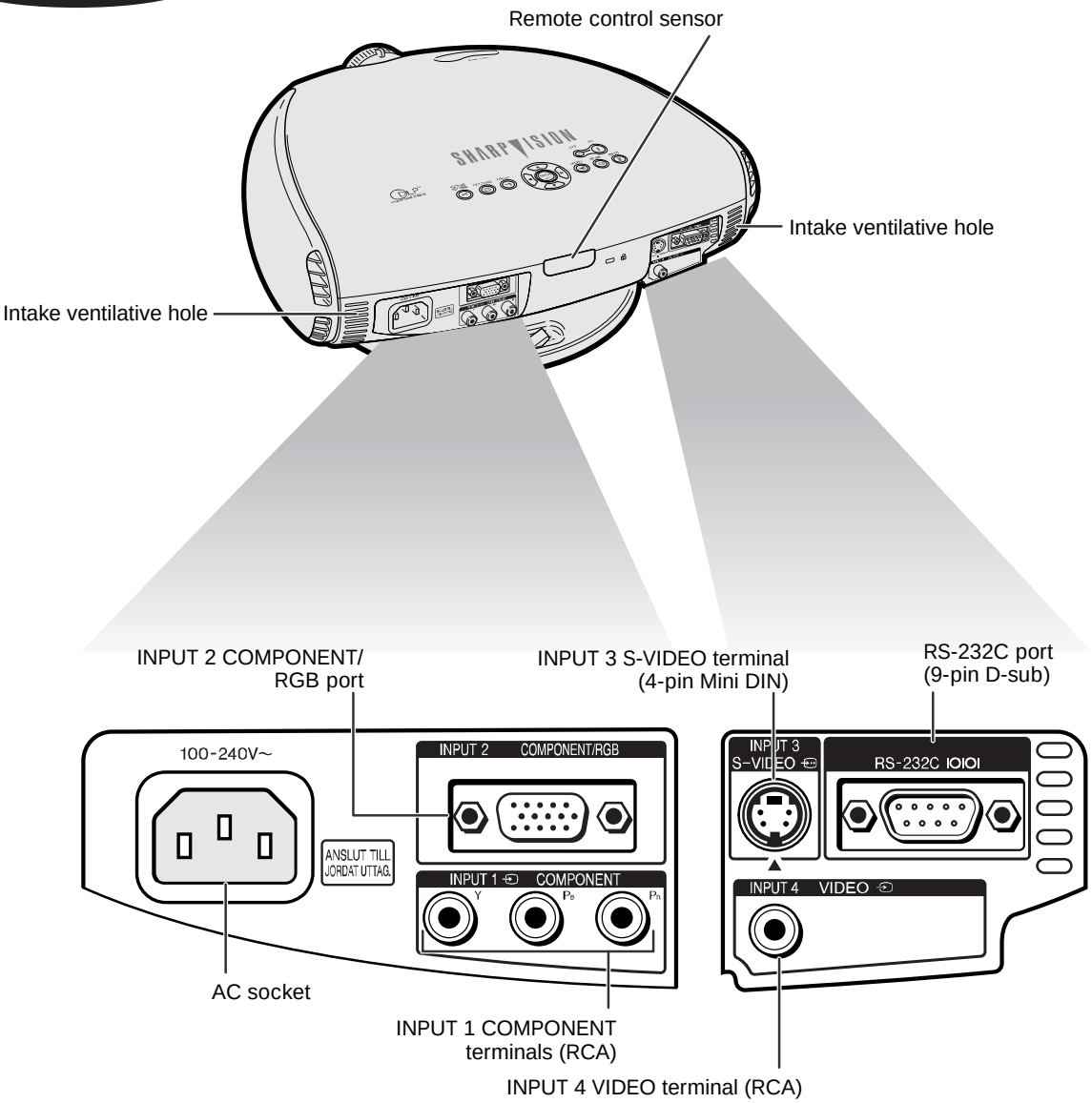


Side and Rear View



Projector

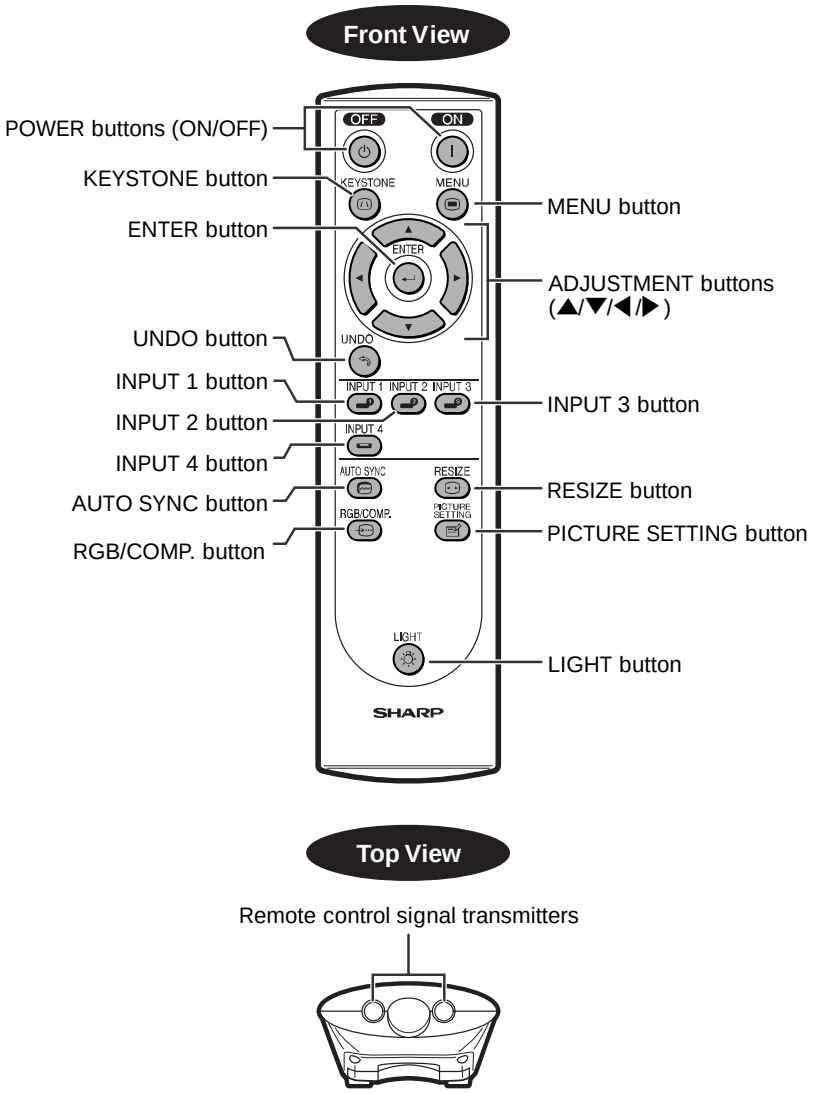
Side and Rear View



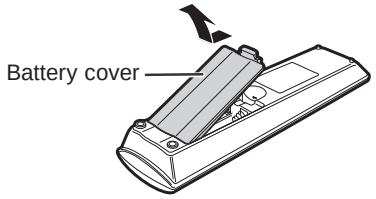
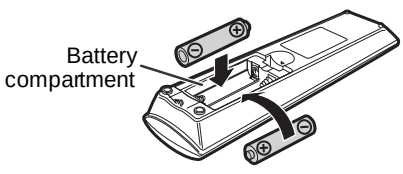
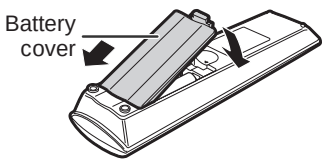
Attaching the Lens Cap

After putting the lens cap strap on the lens cap, pass the other end of the strap through the hole under the projector, next to the lens.

Remote Control

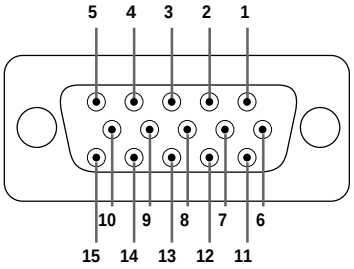


Inserting the batteries

1 **Pull down the tab on the battery cover and remove the cover towards the direction of the arrow**	**2** **Insert two AA size batteries, making sure the polarities match the + and - marks inside the battery compartment.**	**3** **Insert the lower tab of the battery cover into the opening, and press the cover until it clicks in place.**
		

Connection Pin Assignments

INPUT 2 COMPONENT/RGB Port: 15-pin Mini D-sub female connector



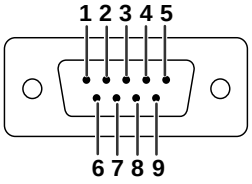
• **RGB Input**

Pin No.	Signal	Pin No.	Signal
1	Video input (red)	8	Ground (blue)
2	Video input (green/sync on green)	9	Not connected
3	Video input (blue)	10	Ground
4	Not connected	11	Ground
5	Composite sync	12	Bi-directional data
6	Ground (red)	13	Horizontal sync signal
7	Ground (green/sync on green)	14	Vertical sync signal
		15	Data clock

• **Component Input**

Pin No.	Signal	Pin No.	Signal
1	Video input P_R (C_R)	8	Ground (P_B)
2	Video input Y	9	Not connected
3	Video input P_B (C_B)	10	Not connected
4	Not connected	11	Not connected
5	Not connected	12	Not connected
6	Ground (P_R)	13	Not connected
7	Ground (Y)	14	Not connected
		15	Not connected

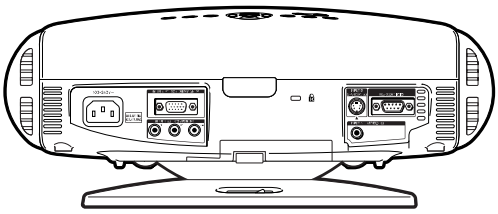
RS-232C Port: 9-pin D-sub male connector of the DIN-D-sub RS-232C cable



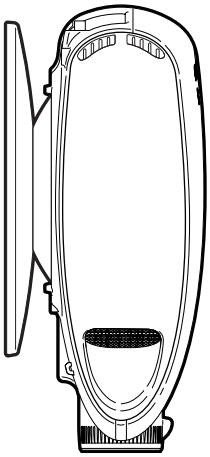
Pin No.	Signal	Name	I/O	Reference
1				Not connected
2	RD	Receive Data	Input	Connected to internal circuit
3	SD	Send Data	Output	Connected to internal circuit
4		Reserved		Connected to internal circuit
5	SG	Signal Ground		Connected to internal circuit
6		Reserved		Connected to internal circuit
7		Reserved		Connected to internal circuit
8		Reserved		Connected to internal circuit
9				Not connected

Dimensions

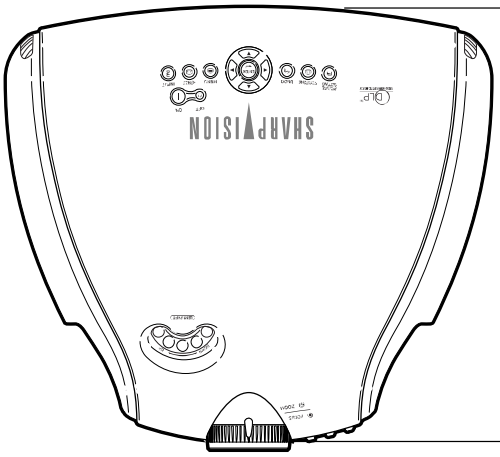
Rear View



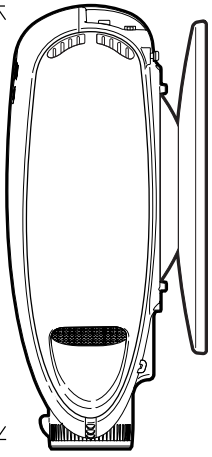
Side View



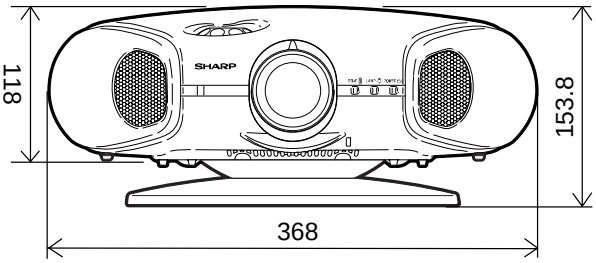
Top View



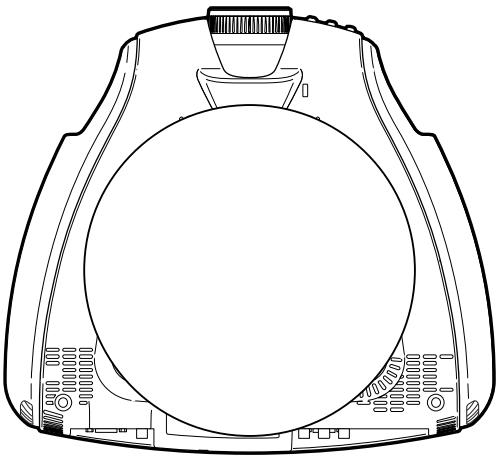
Side View



Front View



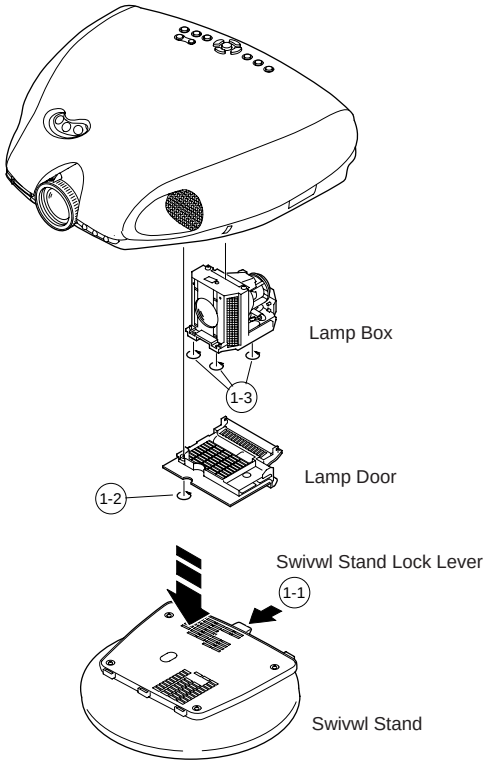
Bottom View



Units:mm

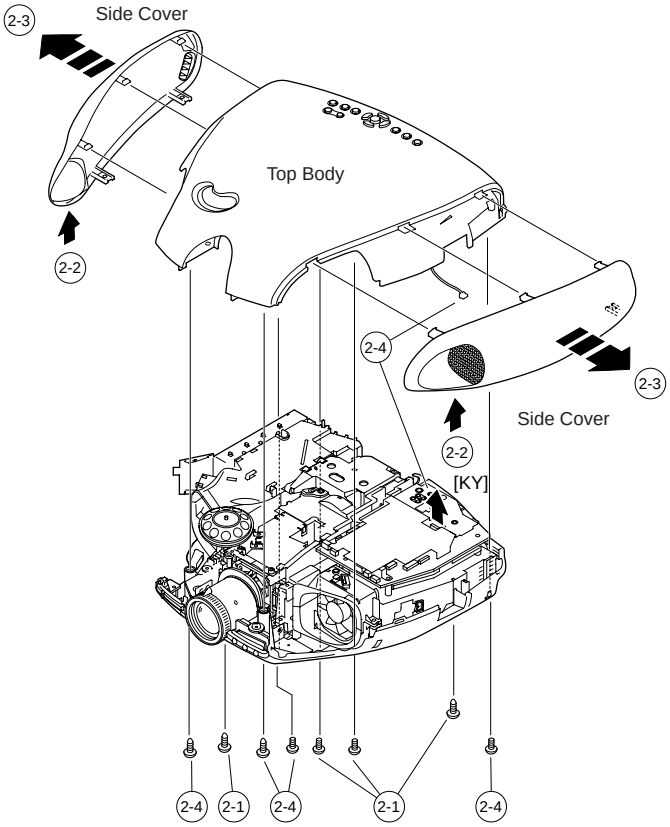
REMOVING OF MAJOR PARTS

1. Removing the swivel stand and the lamp box.



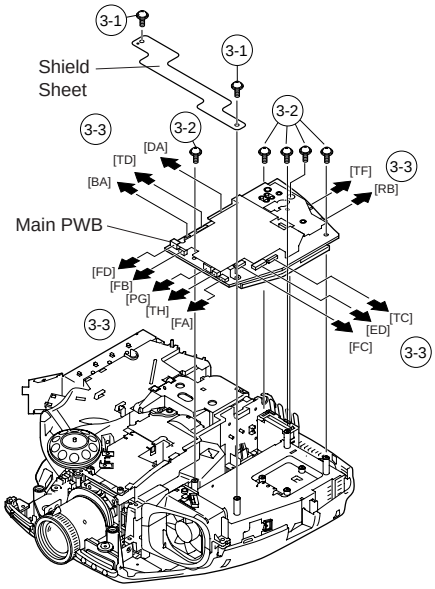
1-1. Remove lock lever, and remove the swivel stand.
1-2. Loosen 1 scrwew, and remove the lamp door .
1-3. Loosen 3 screws, and take out a lamp box.

2. Removing the side covers and the top body.



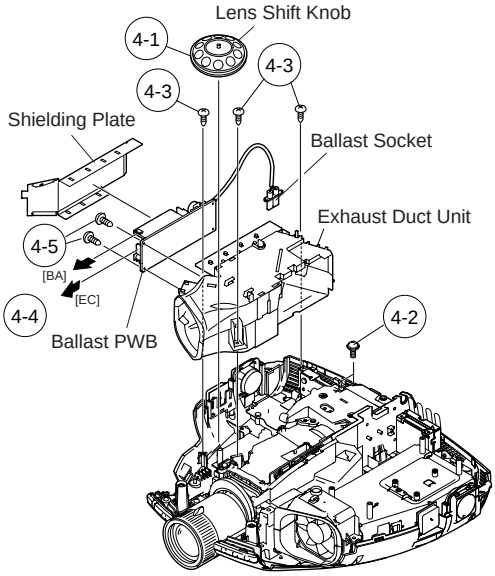
2-1. Remove 4 screws.
2-2. Push front end of the side cover from bottom, and remove a hook.
2-3. Pull the side cover in the direction of the arrow, and remove it.
2-4. Remove 4 screws and 1connector, and remove a top body.

3. Removing the main PWB.



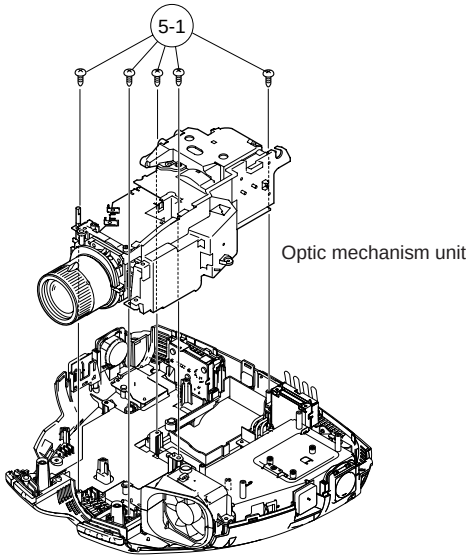
3-1. Remove 2 screws and shield sheet.
3-2. Remove 5 screws.
3-3. Remove each connector on the main PWB.

4. Removing the Ballast unit.



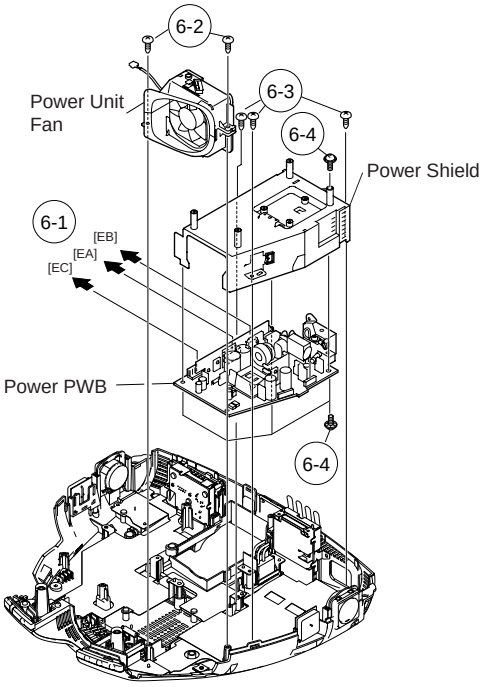
4-1. Remove lens shift knob.
4-2. Remove 2 screws, and remove the ballast socket.
4-3. Remove 3 screws, and remove the exhaust duct unit.
4-4. Remove shielding plate, and remove 2 connectors on the ballast PWB.
4-5. Remove 2 screws, and remove ballast PWB.

5. Removing the optic mechanism unit.



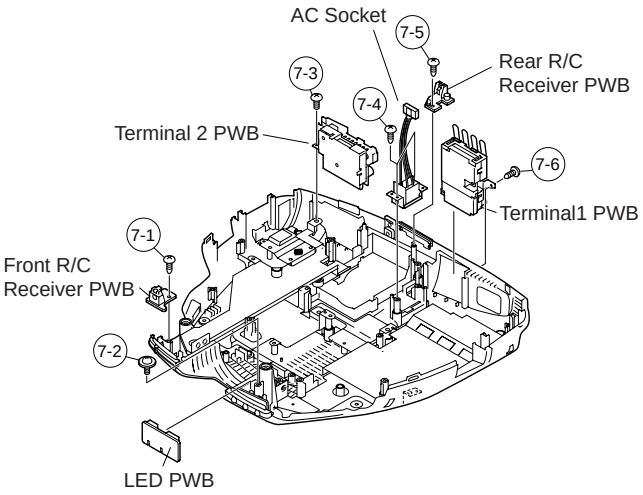
5-1. Remove 5 screws, and remove the optic mechanism unit.

6. Removing the power unit.



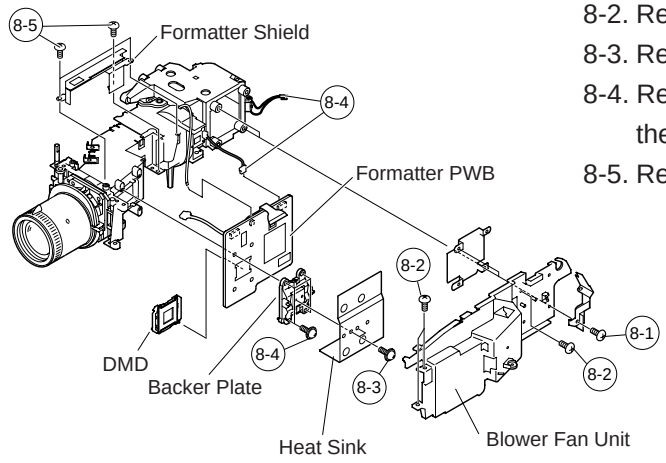
6-1. Remove each connector on the power PWB.
6-2. Remove 2 screws, and remove the power unit fan.
6-3. Remove 3 screws, and take out the power unit assembly.
6-4. Remove 5 screws, and remove power shield.

7. Removing the each other PWBs.



7-1. Remove 1 screw, and remove front R/C receiver PWB unit .
7-2. Remove 1 screw, and remove LED PWB unit.
7-3. Remove 1 screw, and remove a terminal-2 PWB unit.
7-4. Remove 2 screws, and remove an AC switch.
7-5. Remove 1 screw, and remove rear R/C receiver PWB unit.
7-6. Remove 1 screw, and remove DVI-TAN1 PWB unit.

8. Removing the formatter PWB.



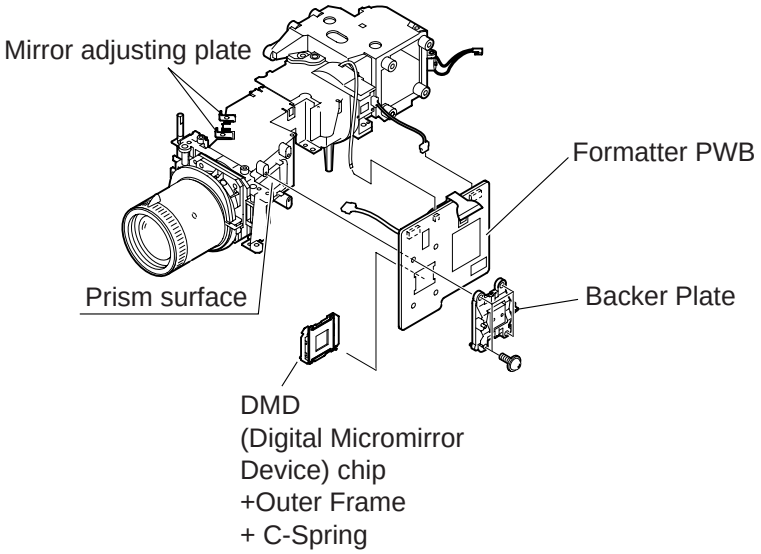
8-1. Remove 1 screw, and remove the angle.
8-2. Remove 3 screws, and remove the blower fan unit.
8-3. Remove 2 screws, and remove the heat sink.
8-4. Remove 4 screws and two connectors, and remove the formatter PWB.
8-5. Remove 2 screws, and remove the formatter shield.

Precautions in replacing the DMD chip

Note: Be careful not to allow dust and fingerprint on the cover glass of DMD chip and prism surface of optical engine.

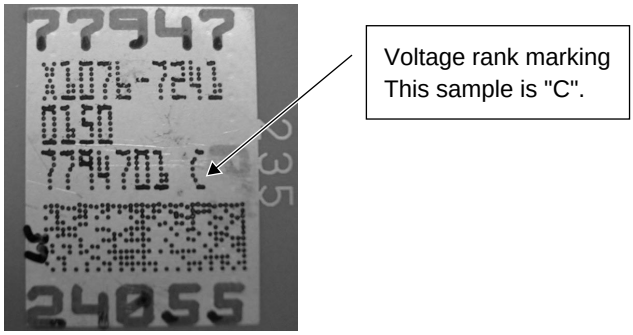
1. When you fix 4screws of backer plate assembly, press backer plate to formatter PWB and fix by cross multiply step by step.
2. If something shade appears on the projection screen like Fig1, release 2 screws on mirror adjusting plate and move that plate to adjust illumination area of DMD chip.

Fig.1 Shade

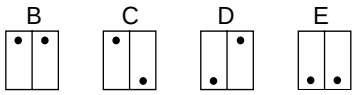


*** Precautions in setting up the DMD (Digital Micromirror Device) unit**

Before connecting the formatter PWB to the optical engine, take the following steps. Look at the voltage rank marking that is on the DMD itself. Referring to this marking, set the DIP switches on the formatter PWB. And connect this PWB to the optical engine. Wrong settings will adversely affect the system performance.

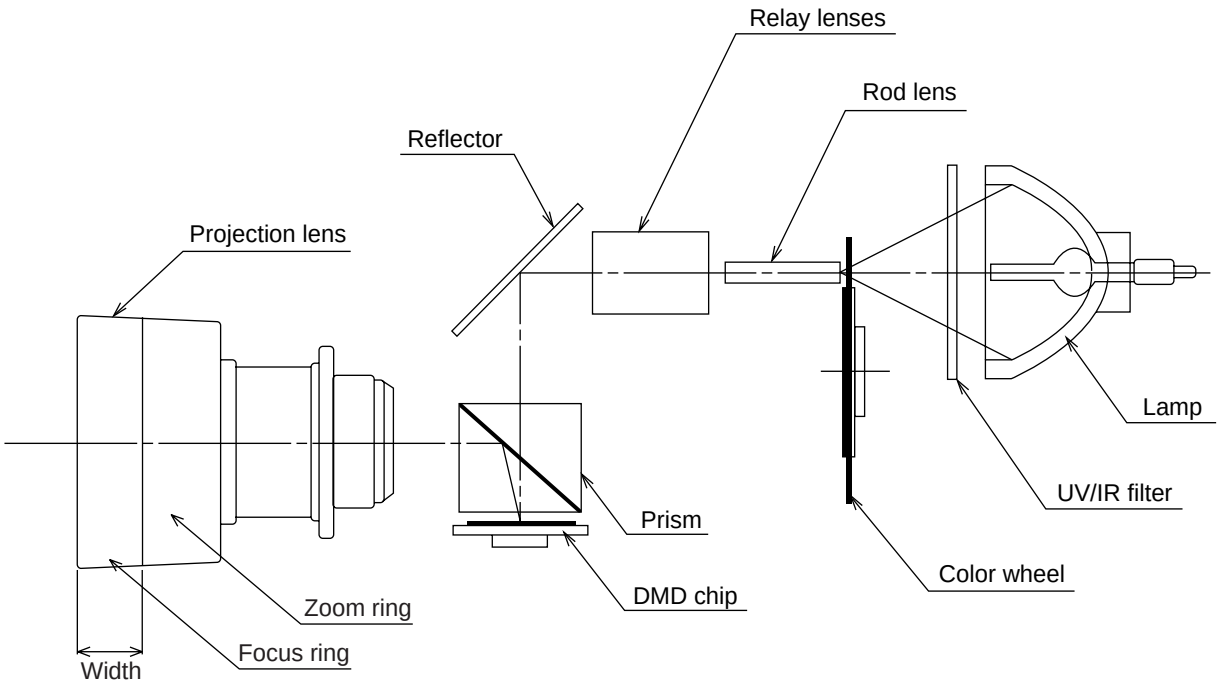


Voltage ranking system with the switch switches on formatter PWB



Outline of the optical unit

<Layout>



Item	Function
Lamp	Light source. DC-driven high-pressure mercury vapor lamp.
UV/IR filter	Used to absorb ultraviolet and infrared rays.
Color wheel	Used to let the source light through the color filter and to separate it into R, G and B colors.
Rod lens	Used to make for uniform light beams.
Relay lenses	Used to collect the light from the rod lens into the DMD chip.
Reflector	Used to reflect the light from the relay lenses against the DMD chip.
Prism	Used to introduce the light from the reflector over the effective surface of the DMD chip. When the micromirror gets tilted (ON) as specified, the reflected light is guided to the projection lens.
DMD chip	Used to turn on and off the micromirror in response to the ratio of color components at each dot and thus to reflect the incoming light accordingly.
Projection lens	Used to enlarge the light from the DMD chip and to get the light projected on the screen.

Distinction between long and short focal length lens

- Long focal length lens: focus ring width: about 18 mm ▶ XV-Z90E
- Short focal length lens: focus ring width: about 27 mm ▶ XV-Z91E

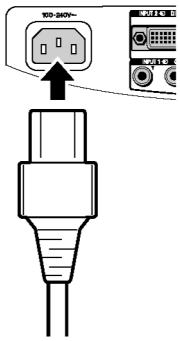
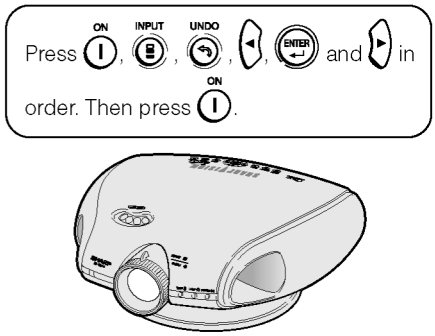
Caution when repairing without top cabinet

To repair this set without top cabinet, attach the left side body beforehand. (Since the exhaust heat gets in around the set and the temperature sensor detects it giving the TEMP error and the lamp goes off.)

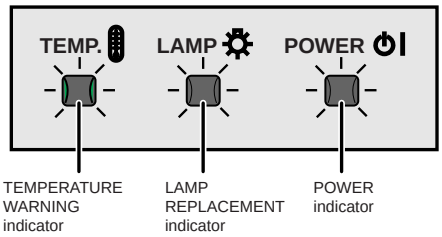
RESETTING THE TOTAL LAMP TIMER

You need to reset the lamp timer every time you replace the lamp and confirm it is reset on the "Lamp Timer" menu.

How to reset the total lamp timer.

1. Plug the power cord	2. Press POWER ON on the projector to reset the lamp timer.
	 "LAMP 0000H" is displayed on the screen.

Maintenance Indicators



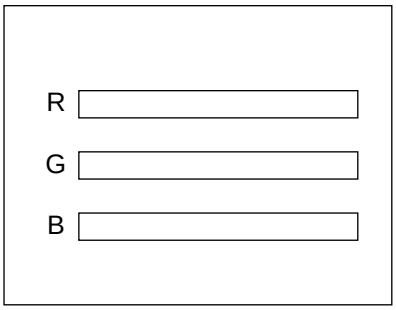
- The warning lights on the projector indicate problems inside the projector.
- There are two types of warning lights: a TEMPERATURE WARNING indicator that warns you when the projector is too hot, and a LAMP REPLACEMENT indicator that warns you when to change the lamp.
- If a problem occurs, either the TEMPERATURE WARNING indicator or the LAMP REPLACEMENT indicator will illuminate in red. After turning off the power, follow the procedures given below.

Maintenance Indicator	Condition	Problem	Possible Solution
TEMPERATURE WARNING indicator	The internal temperature is abnormally high.	• Blocked air intake.	• Relocate the projector to an area with proper ventilation.
		• Clogged ventilative hole.	• Clean the ventilative holes.
		• Cooling fan breakdown. • Internal circuit failure.	• Take the projector to your nearest Authorized SharpVision Service Center or Dealer for repair.
LAMP REPLACEMENT indicator	The lamp does not light up.	• Burnt-out lamp. • Lamp circuit failure.	• Carefully replace the lamp. • Take the projector to your nearest Authorized SharpVision Service Center or Dealer for repair.
	The lamp requires replacement.	• Lamp has been used for over 2,400 hours.	

NOTE

- If the TEMPERATURE WARNING indicator lights up, follow the above possible solutions and then wait until the projector has cooled down completely before turning the power back on. (At least 5 minutes.)
- If the power is turned off and then turned on again, for example during a brief rest, the may be triggered, preventing the power from going on. Should this occur, unplug the power cord from the wall outlet and plug it back in again.

ELECTRICAL ADJUSTMENT

No.	Adjustment Items	Adjustment Conditions	Adjustment Procedures
1	Initialization of EEPROM	1. Turn on the power (the lamp lights up) and warm up the system for 15 minutes.	1. Carry out the following setting. Using the remote controller or press S2002 to enter the process mode, and execute SS2 on SS menu.
2	Adjustment of CW index	1. Input the gradation pattern of RGB. 2. Select the following group and subject. Group: DLP Subject: Select CW-INDEX.	1. Select subject and make adjustment so that the lamp gradation patterns of R, G and B should be smooth without noise. 
3-1	Adjustment of R brightness/contrast	1. Select the following group and subject. Group: AD Subject: R-Bright R-Contrast 2. Feed the window pattern having 91%(0.64Vp-p) R signal and 0%. (Process gamma interlock)	1. On the bit-less screen, adjust in the order of black side R-bright and white side R-contrast. Adjust the black level so that bright red bit-less may disappear and may turn pale red. Adjust the white level so that red bit-less may appear from black.
3-2	Adjustment of G brightness/contrast	1. Select the following group and subject. Group: AD Subject: G-Bright G-Contrast 2. Feed the window pattern having 91%(0.64Vp-p) G signal and 0%. (Process gamma interlock)	1. On the bit-less screen, adjust in the order of black side G-bright and white side G-contrast. Adjust the black level so that bright green bit-less may disappear and may turn pale green. Adjust the white level so that green bit-less may appear from black.
3-3	Adjustment of B brightness/contrast	1. Select the following group and subject. Group: AD Subject: B-Bright B-Contrast 2. Feed the window pattern having 91% (0.64Vp-p) B signal and 0%. (Process gamma interlock)	1. On the bit-less screen, adjust in the order of black side B-bright and white side B-contrast. Adjust the black level so that bright blue bit-less may disappear and may turn pale blue. Adjust the white level so that blue bit-less may appear from black.

No.	Adjustment Items	Adjustment Conditions	Adjustment Procedures
4	Adjustment of DTV brightness/ contrast	1. Feed 480P 100% Black/White window pattern signal. 2. Select the following group and subject. Group: DTV Subject: Bright Contrast (Process gamma interlock)	1. On the bit-less screen, adjust in the order of black side Bbright and white side Contrast. Adjust the black level so that bright green bit-less may disappear and may turn pale green. Adjust the white level so that bit-less may appear from black.
5	Adjustment of DTV tint	1. Select the following group and subject. Group: DTV Subject: Tint	1. Confirm the fixed value. Tint: 8
6	Adjustment of DTV color saturation	1. Select the following group and subject. Group: DTV Subject: Color	1. Confirm the fixed value. Color: 13
7	Adjustment of DVD brightness/ contrast	1. Feed 480I 10STEP signal (without setup). 2. Select the following group and subject. Group: DVD Subject: Bright Contrast (Process gamma interlock)	1. On the bit-less screen, adjust in the order of black side Bbright and white side Contrast. Adjust the black level so that bright green bit-less may disappear and may turn pale green. Adjust the white level so that bit-less may appear from black.
8	Adjustment of DVD tint	1. Select the following group and subject. Group: DVD Subject: Tint	1. Confirm the fixed value. Tint: 4
9	Adjustment of DVD color saturation	1. Select the following group and subject. Group: DVD Subject: Color	1. Confirm the fixed value. Color: 10
10	Adjustment of Video brightness/ contrast	1. Feed NTSC 10STEP signal (without setup). 2. Select the following group and subject. Group: VIDEO Subject: Bright Contrast (Process gamma interlock)	1. Adjust the setting value of Bright become the same as DVD-Bright. 2. On the bit-less screen, adjust in the order of black side Bbright and white side Contrast. Adjust the white level so that bit-less may appear from black.
11	Adjustment of Video tint	1. Select the following group and subject. Group: VIDEO Subject: N-Tint P-Tint S-Tint	1. Confirm the fixed value. N-Tint: 4 P-Tint: 4 S-Tint: 4

No.	Adjustment Items	Adjustment Conditions	Adjustment Procedures
12	Adjustment of Video color saturation	1. Select the following group and subject. Group: VIDEO Subject: N-Color P-Color S-Color	1. Confirm the fixed value. N-Color: 10 P-Color: 10 S-Color: 10
13	Adjustment of DTV white balance	1. Feed 480P75% gray signal. 2. Select the following group and subject. Group: DTV Subjects: R-DRIVE(R) B-DRIVE(B)	1. Confirm the fixed value. R-DRIVE: 41 B-DRIVE: 41 (x=291, y=320)

Adjustment when assembling

No.	Adjustment Items	Adjustment Conditions	Adjustment Procedures
14	Adjustment of DLP voltage (Reference)	1. Read voltage rank of DLP description. 2. Set the switch corresponding to the rank which has been read. (on the formatter PWB)	1. Carry out adjustment when DLP chip has been replaced or combination of chip and formatter has been changed. 2. Rank: B C D E Setting value: 1 2 3 4

Confirmation

No.	Adjustment Items	Adjustment Conditions	Adjustment Procedures
15	Check and re-adjustment of the white balance	The adjustment conditions of the item 13 for the DTV input.	Check that the white balance is in the best condition. In case to re-adjust, carry out DVD input only.
16	Confirmation of color-related operation	1. Receive the color bar signal.	1. Select L1 in the process mode. Check the performance of color and tint.
17	Confirmation of picture-related operation	1. Receive monoscope pattern signal.	1. Select L2 in the process mode. Check Picture, Brightness and Sharpness.
18	Confirmation of RGB	1. Receive the RGB signal.	1. Select L4 on the process mode. Check Picture, Brightness, Red, Blue, Clock, Phase, H-POS and V-POS.
19	Confirmation of off-timer operation		1. Select OFF in the process mode. Confirm that the off-timer starts with 5-minute display, counts 1 minute for 1 second, and turns off when 0 minute is displayed.

<table>
<tr><th>No.</th><th>Adjustment Items</th><th>Adjustment Conditions</th><th>Adjustment Procedures</th></tr>
<tr><td>20</td><td>Confirmation of thermistor operation</td><td>1. Heat the thermistor by dryer.</td><td>1. Confirm that the temperature is displayed.</td></tr>
<tr><td>21</td><td>Automatic sync operation</td><td>1. Receive the phase checking pattern signal.</td><td>1. Confirm that Clock, Phase, H-POS and V-POS can be automatically adjusted in the VGA/S-VGA/XGA mode.</td></tr>
<tr><td>22</td><td>Factory settings</td><td></td><td>1. Make the following settings.<table><tr><td>Process adjustment</td><td>Remote controller settings</td></tr><tr><td>SS3</td><td>"Factory Setting 3"</td></tr></table></td></tr>
</table>

Entering the adjustment process mode

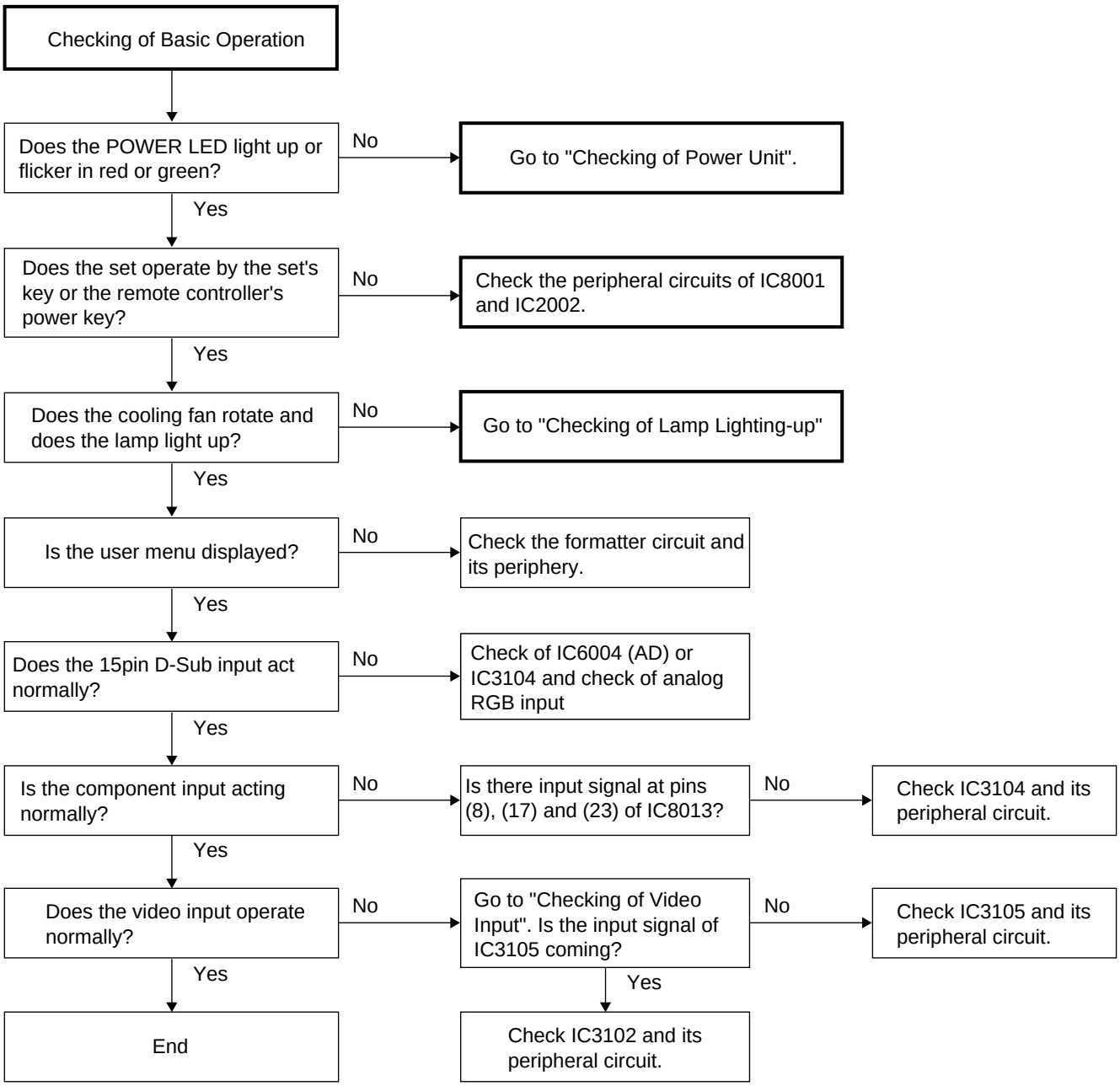
There are following two mothods.

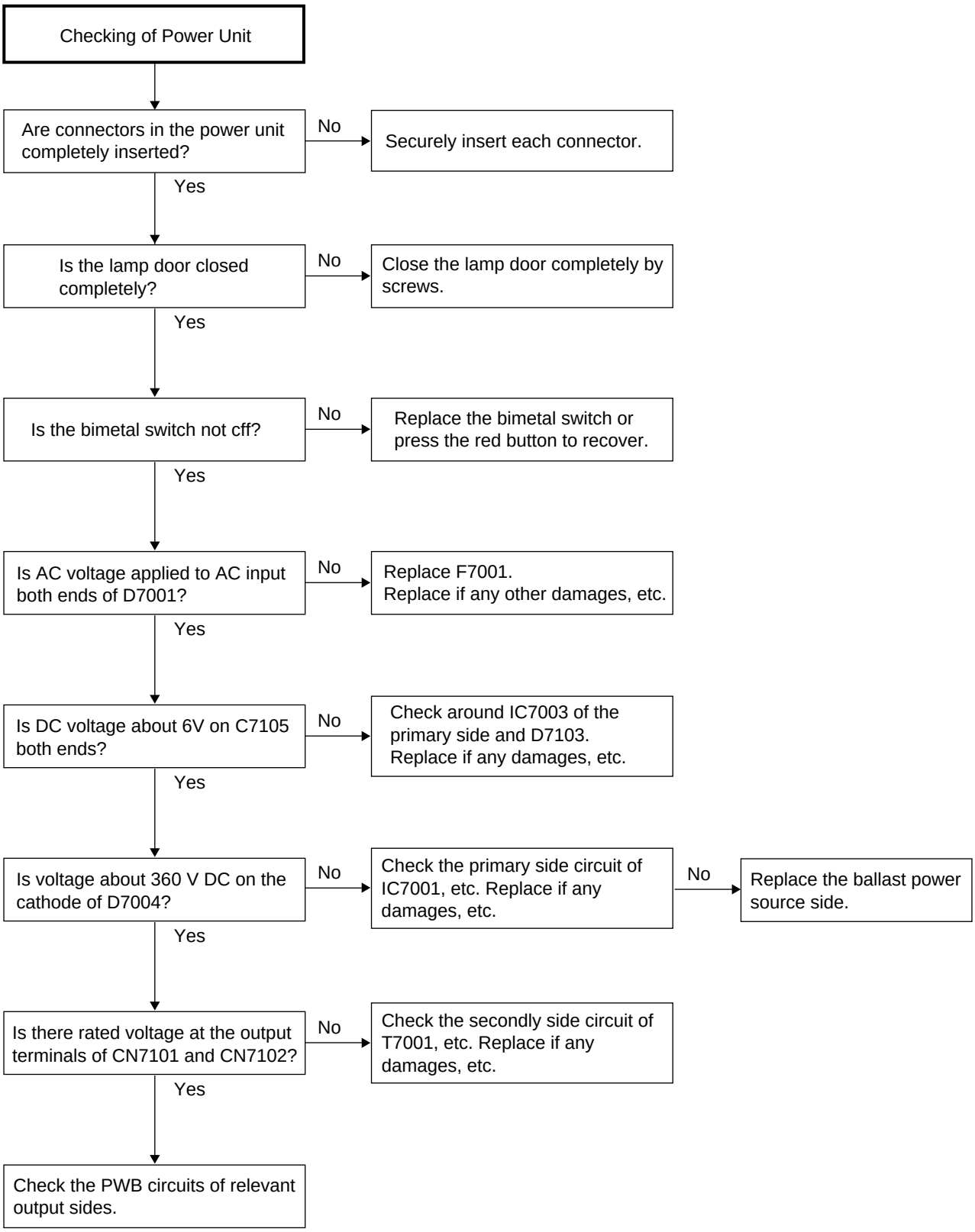
- Press the SW2002 on the MAIN PWB.
- Press the following keys in this order.
  Adj up→Adj up→Adj down→Adj down→Adj right→Adj left→Enter

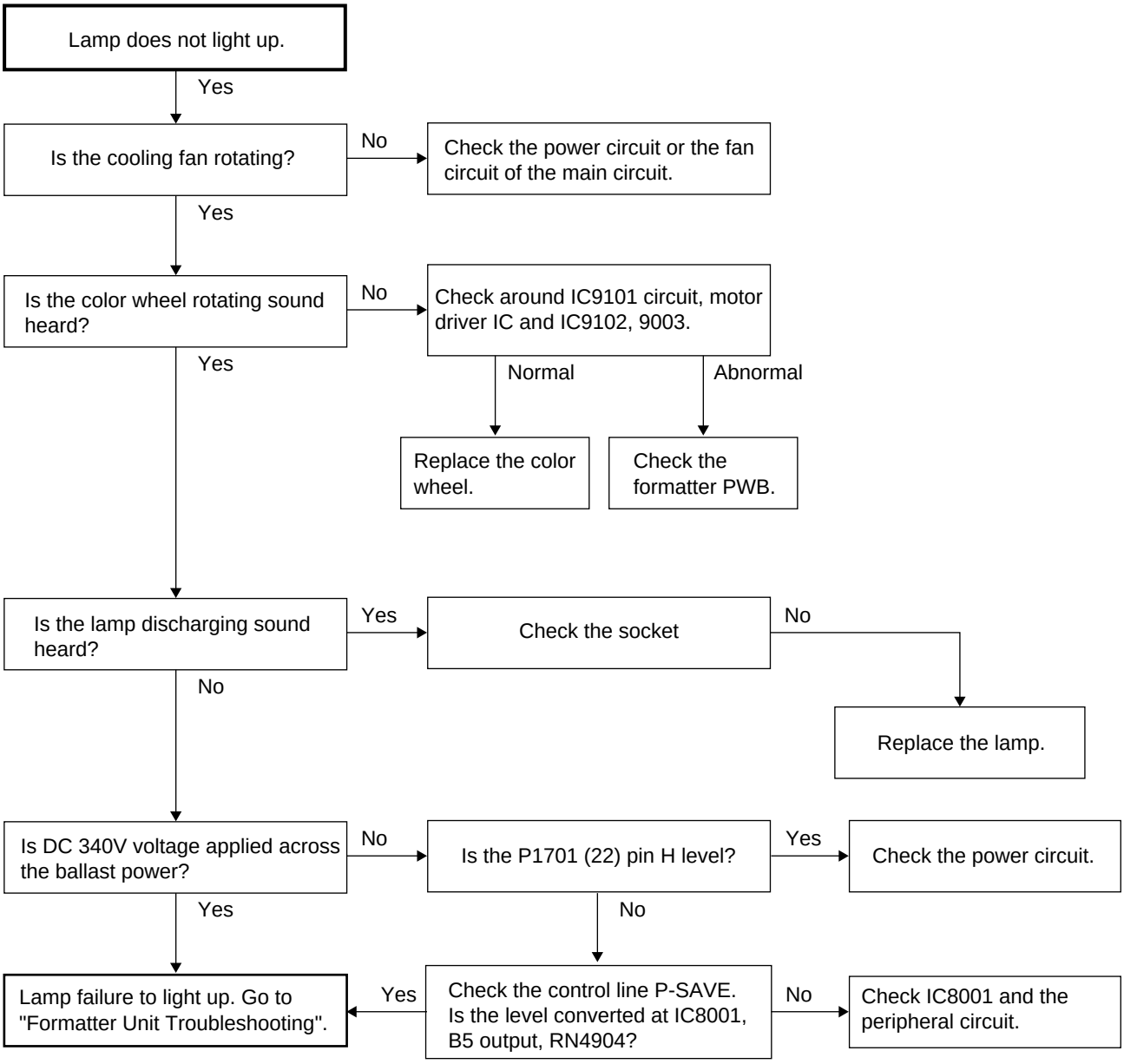
Adjustment mode process menu

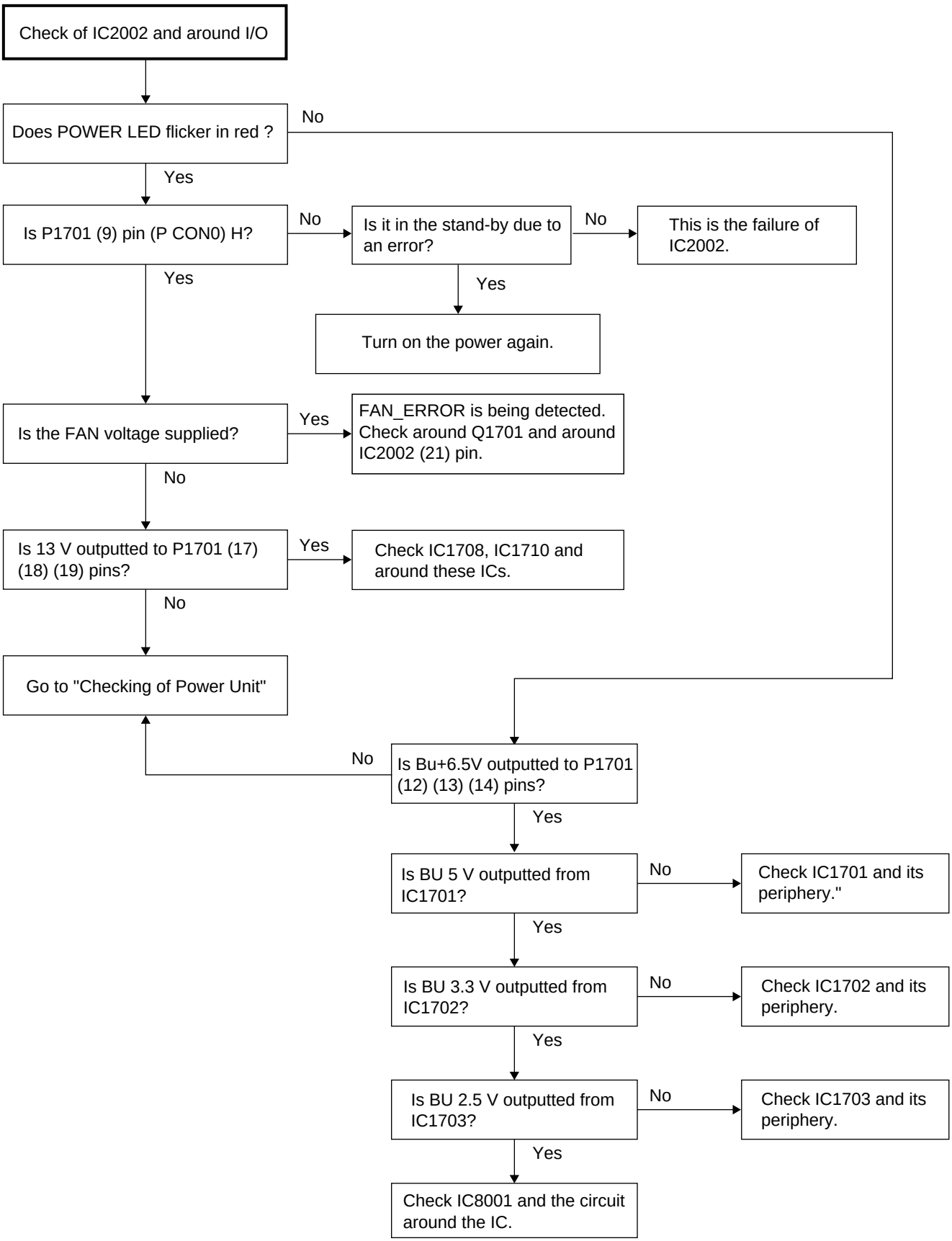
Group	Subject	Group	Subject
DTV	Contrast	AD	R-Bright
	Tint		R-Contrast
	Color		G-Bright
	Sharpness		G-Contrast
	CTI-Level		B-Bright
	LTI-Level		B-Contrast
	CB-Offset	DLP	Index Delay
	CR-Offset		R-Bright
	Bright		R-Contrast
	B-DRIVE		G-Bright
	R-DRIVE		G-Contrast
DVD	Contrast		B-Bright
	Tint		B-Contrast
	Color	VIDEO1	N-Contrast
	Sharpness		P-Contrast
	CTI-Level		S-Contrast
	LTI-Level		Color
	CB-Offset		NT3.58 Delay
	CR-Offset		NT4.43 Delay
	Bright		PAL Delay
	B-DRIVE		SECAM Delay
	R-DRIVE	VIDEO2	SS-Cont1
VIDEO	Contrast		SS-C0nt2
	N-Tint		Color
	P-Tint		SS1 Delay
	S-Tint		SS2 Delay
	N-Color	Pedestal	R-Bright
	P-Color		R-Contrast
	S-Color		G-Bright
	Sharpness		G-Contrast
	CTI-Level		B-Bright
	LTI-Level		B-Contrast
	CB-Offset		
	CR-Offset		
	Bright		
	B-DRIVE		
	R-DRIVE		

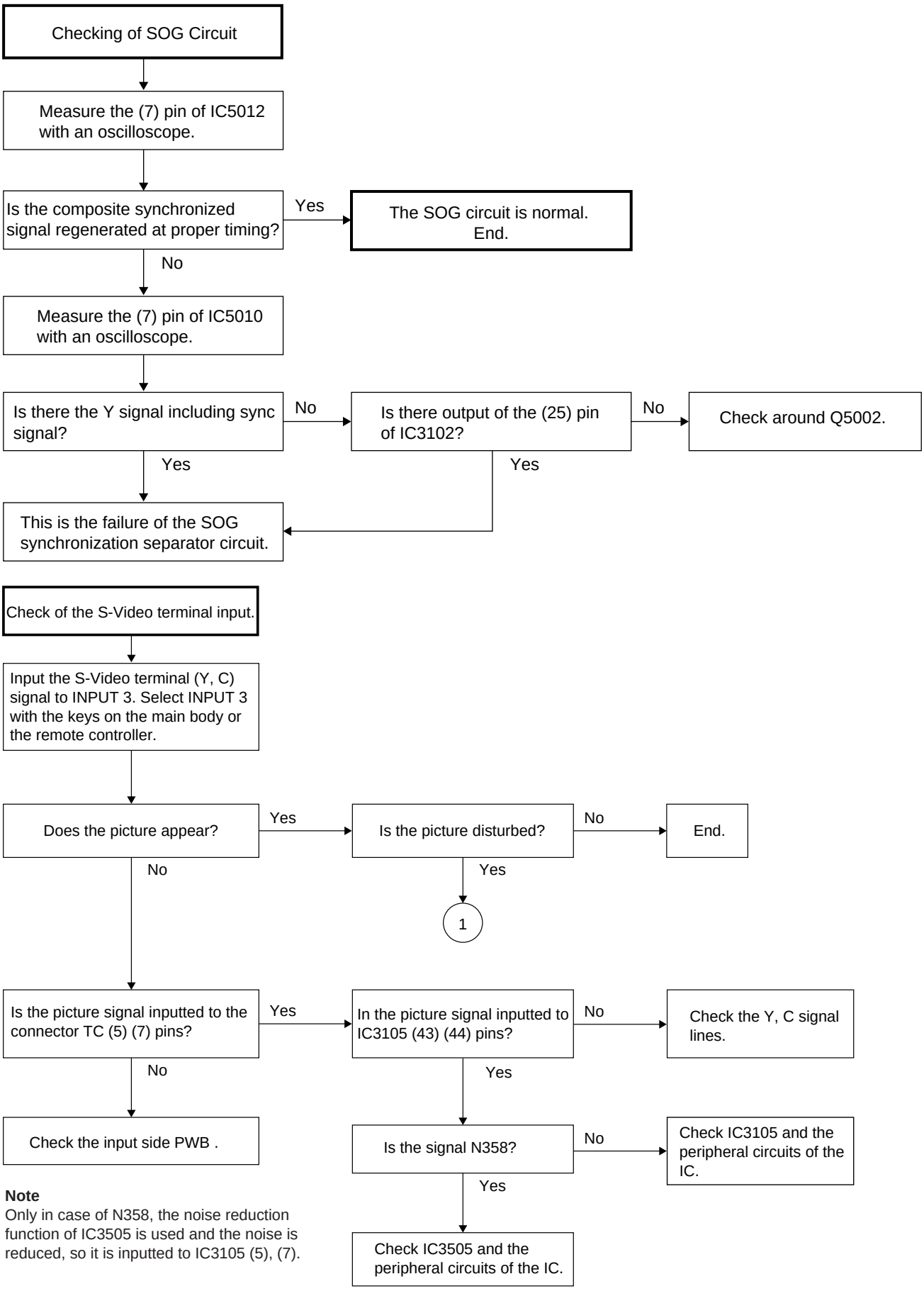
TROUBLE SHOOTING TABLE


Checking of Basic Operation
Does the POWER LED light up or flicker in red or green?
No
Go to "Checking of Power Unit".
Yes
Does the set operate by the set's key or the remote controller's power key?
No
Check the peripheral circuits of IC8001 and IC2002.
Yes
Does the cooling fan rotate and does the lamp light up?
No
Go to "Checking of Lamp Lighting-up"
Yes
Is the user menu displayed?
No
Check the formatter circuit and its periphery.
Yes
Does the 15pin D-Sub input act normally?
No
Check of IC6004 (AD) or IC3104 and check of analog RGB input
Yes
Is the component input acting normally?
No
Is there input signal at pins (8), (17) and (23) of IC8013?
No
Check IC3104 and its peripheral circuit.
Yes
Does the video input operate normally?
No
Go to "Checking of Video Input". Is the input signal of IC3105 coming?
No
Check IC3105 and its peripheral circuit.
Yes
End
Yes
Check IC3102 and its peripheral circuit.

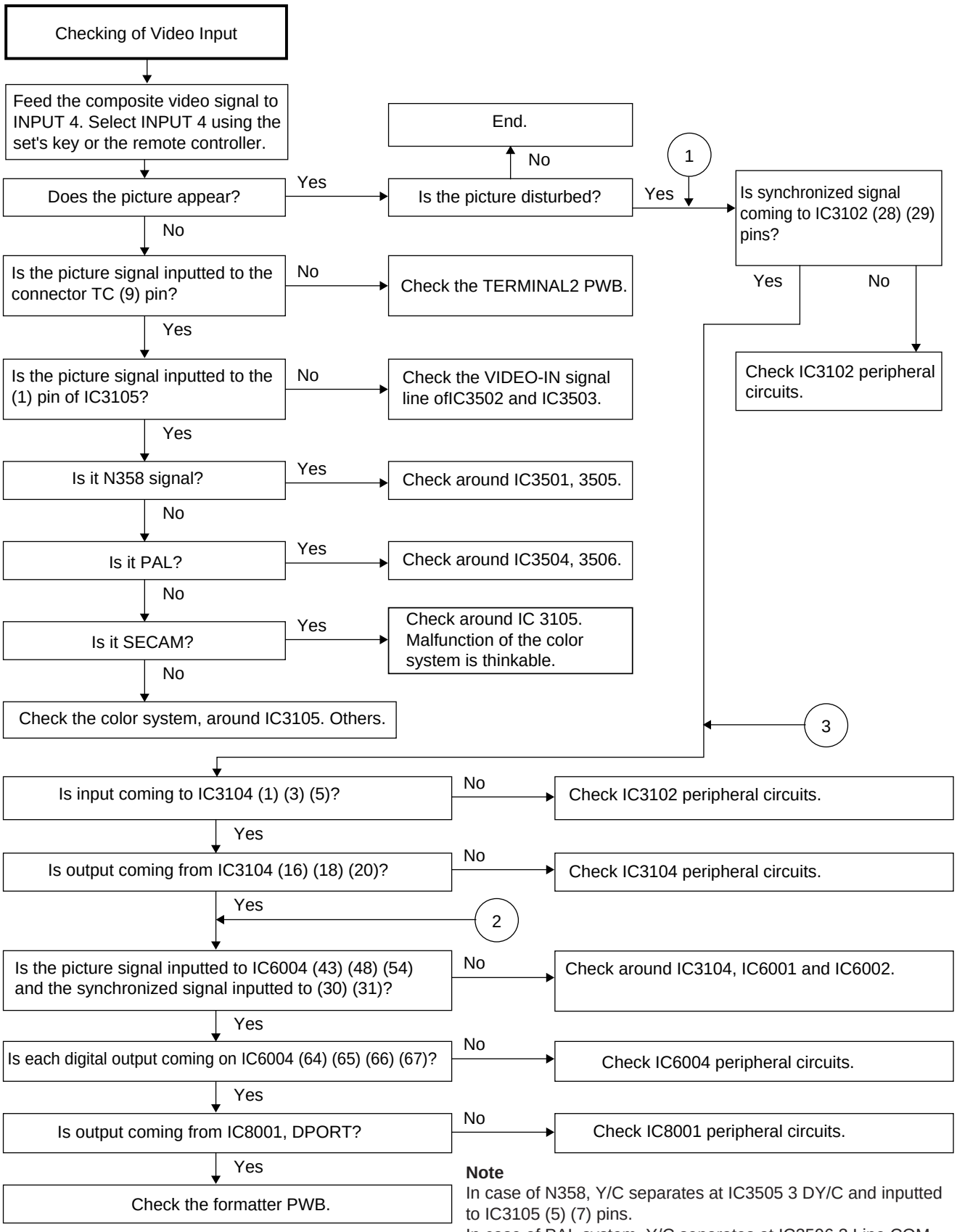

Checking of Power Unit
Are connectors in the power unit completely inserted?
No
Securely insert each connector.
Yes
Is the lamp door closed completely?
No
Close the lamp door completely by screws.
Yes
Is the bimetal switch not cff?
No
Replace the bimetal switch or press the red button to recover.
Yes
Is AC voltage applied to AC input both ends of D7001?
No
Replace F7001.
Replace if any other damages, etc.
Yes
Is DC voltage about 6V on C7105 both ends?
No
Check around IC7003 of the primary side and D7103.
Replace if any damages, etc.
Yes
Is voltage about 360 V DC on the cathode of D7004?
No
Check the primary side circuit of IC7001, etc. Replace if any damages, etc.
No
Replace the ballast power source side.
Yes
Is there rated voltage at the output terminals of CN7101 and CN7102?
No
Check the secondly side circuit of T7001, etc. Replace if any damages, etc.
Yes
Check the PWB circuits of relevant output sides.


Lamp does not light up.
Yes
Is the cooling fan rotating?
No
Check the power circuit or the fan circuit of the main circuit.
Yes
Is the color wheel rotating sound heard?
No
Check around IC9101 circuit, motor driver IC and IC9102, 9003.
Yes
Normal
Abnormal
Replace the color wheel.
Check the formatter PWB.
Is the lamp discharging sound heard?
Yes
Check the socket
No
Replace the lamp.
No
Is DC 340V voltage applied across the ballast power?
No
Is the P1701 (22) pin H level?
Yes
Check the power circuit.
Yes
No
Lamp failure to light up. Go to "Formatter Unit Troubleshooting".
Yes
Check the control line P-SAVE. Is the level converted at IC8001, B5 output, RN4904?
No
Check IC8001 and the peripheral circuit.


Check of IC2002 and around I/O
Does POWER LED flicker in red ?
No
Yes
Is P1701 (9) pin (P CON0) H?
No
Is it in the stand-by due to an error?
No
This is the failure of IC2002.
Yes
Yes
Turn on the power again.
Is the FAN voltage supplied?
Yes
FAN_ERROR is being detected. Check around Q1701 and around IC2002 (21) pin.
No
Is 13 V outputted to P1701 (17) (18) (19) pins?
Yes
Check IC1708, IC1710 and around these ICs.
No
Go to "Checking of Power Unit"
No
Is Bu+6.5V outputted to P1701 (12) (13) (14) pins?
Yes
Is BU 5 V outputted from IC1701?
No
Check IC1701 and its periphery."
Yes
Is BU 3.3 V outputted from IC1702?
No
Check IC1702 and its periphery.
Yes
Is BU 2.5 V outputted from IC1703?
No
Check IC1703 and its periphery.
Yes
Check IC8001 and the circuit around the IC.

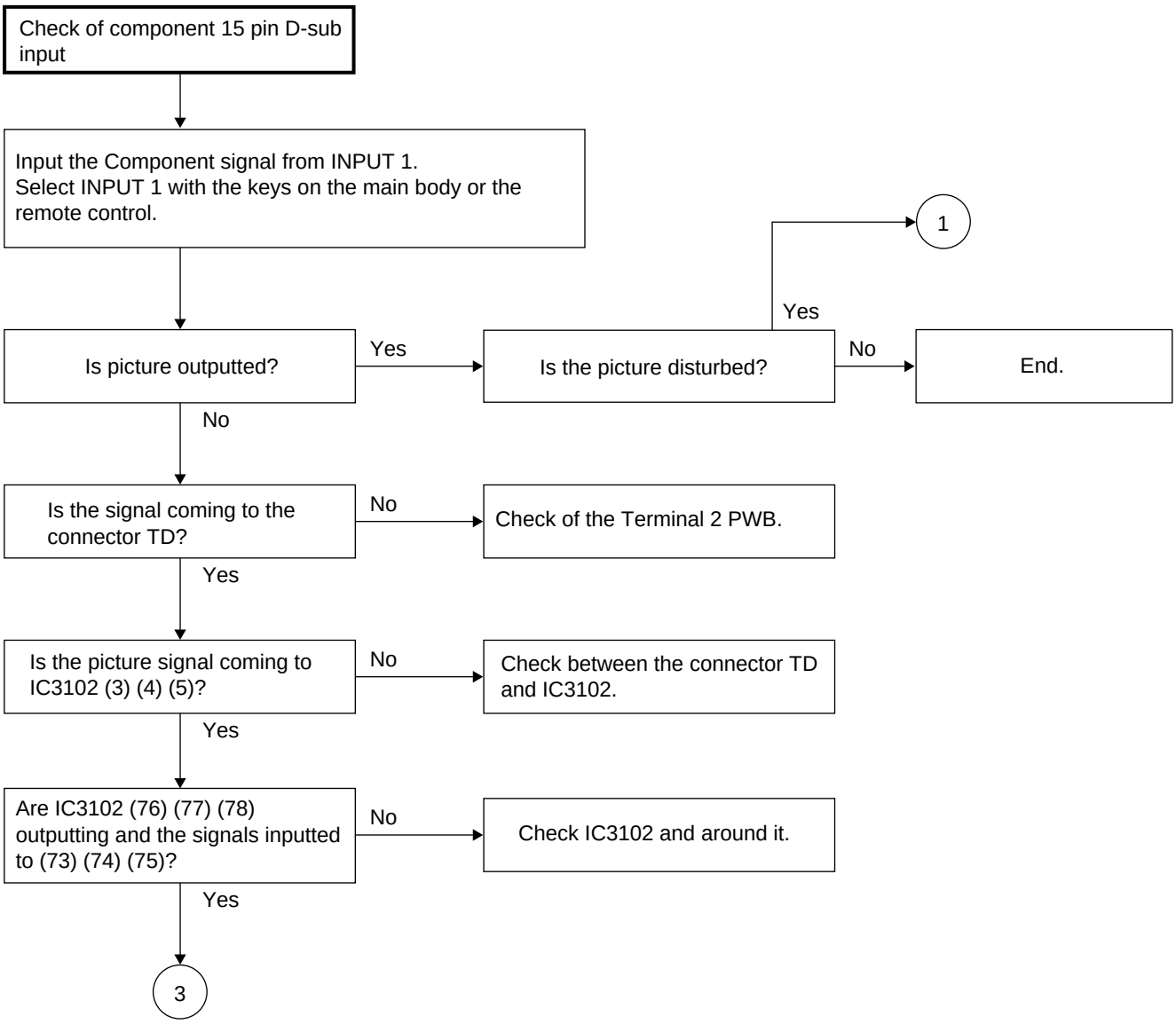

Checking of SOG Circuit
Measure the (7) pin of IC5012 with an oscilloscope.
Is the composite synchronized signal regenerated at proper timing?
Yes
The SOG circuit is normal. End.
No
Measure the (7) pin of IC5010 with an oscilloscope.
Is there the Y signal including sync signal?
No
Is there output of the (25) pin of IC3102?
No
Check around Q5002.
Yes
Yes
This is the failure of the SOG synchronization separator circuit.
Check of the S-Video terminal input.
Input the S-Video terminal (Y, C) signal to INPUT 3. Select INPUT 3 with the keys on the main body or the remote controller.
Does the picture appear?
Yes
Is the picture disturbed?
No
End.
No
Yes
1
Is the picture signal inputted to the connector TC (5) (7) pins?
Yes
In the picture signal inputted to IC3105 (43) (44) pins?
No
Check the Y, C signal lines.
No
Yes
Check the input side PWB .
Is the signal N358?
No
Check IC3105 and the peripheral circuits of the IC.
Yes
Check IC3505 and the peripheral circuits of the IC.

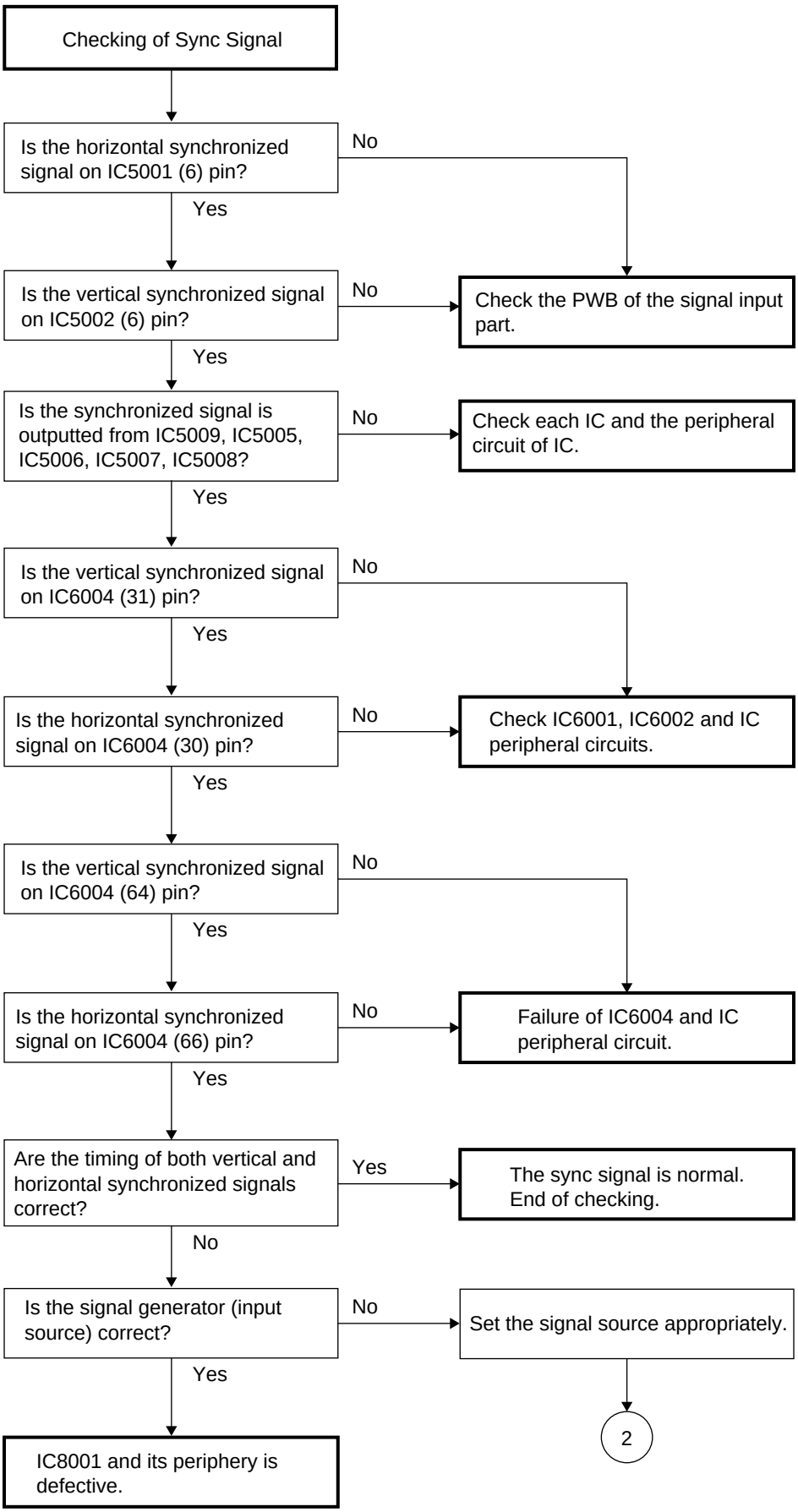
Note
Only in case of N358, the noise reduction function of IC3505 is used and the noise is reduced, so it is inputted to IC3105 (5), (7).



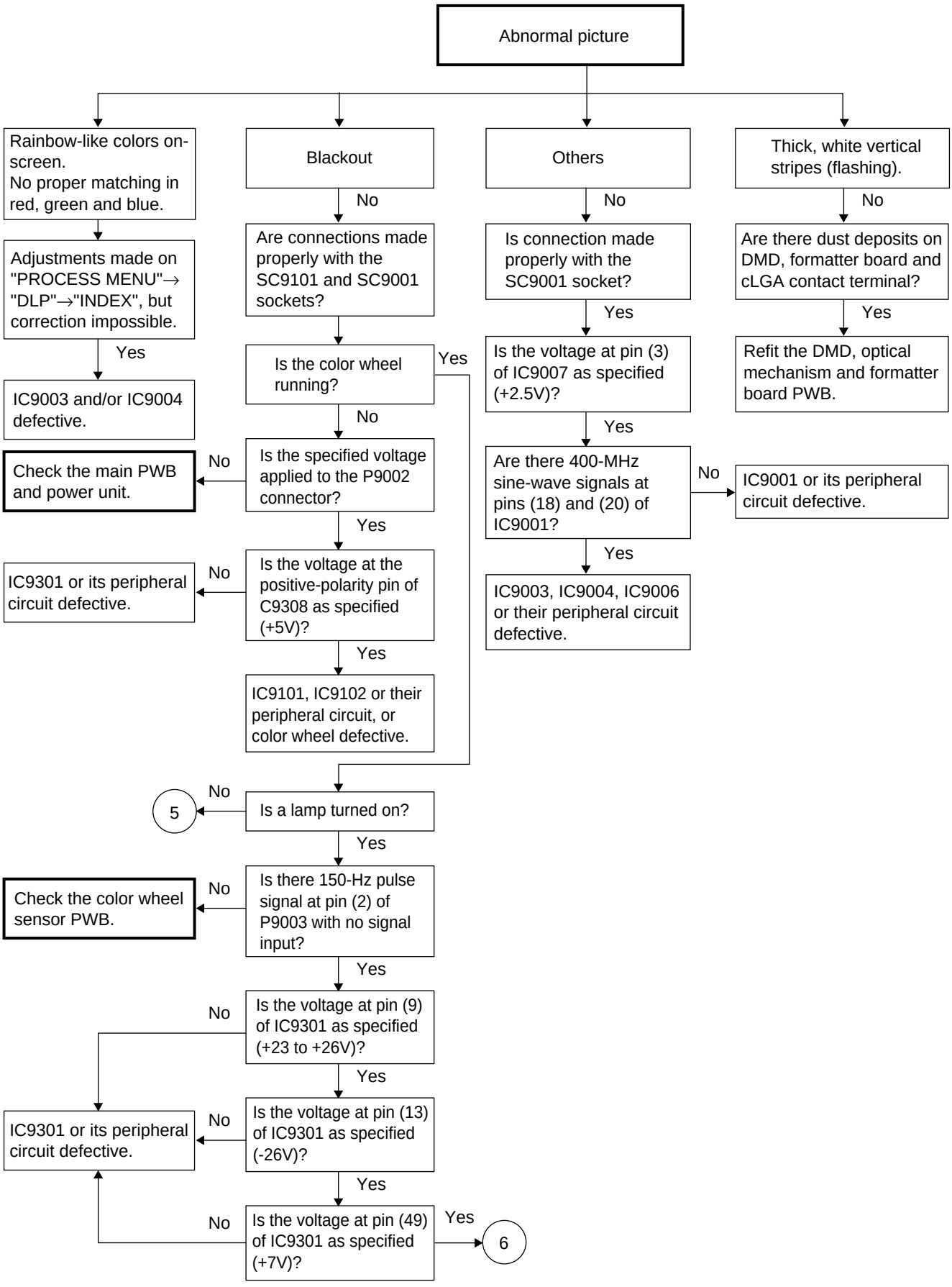
Note

In case of N358, Y/C separates at IC3505 3 DY/C and inputted to IC3105 (5) (7) pins.
In case of PAL system, Y/C separates at IC3506 3 Line COM and inputted to (39) (41) of IC3105.
The video is outputted from (21) (22) (23) at color difference from IC3105.

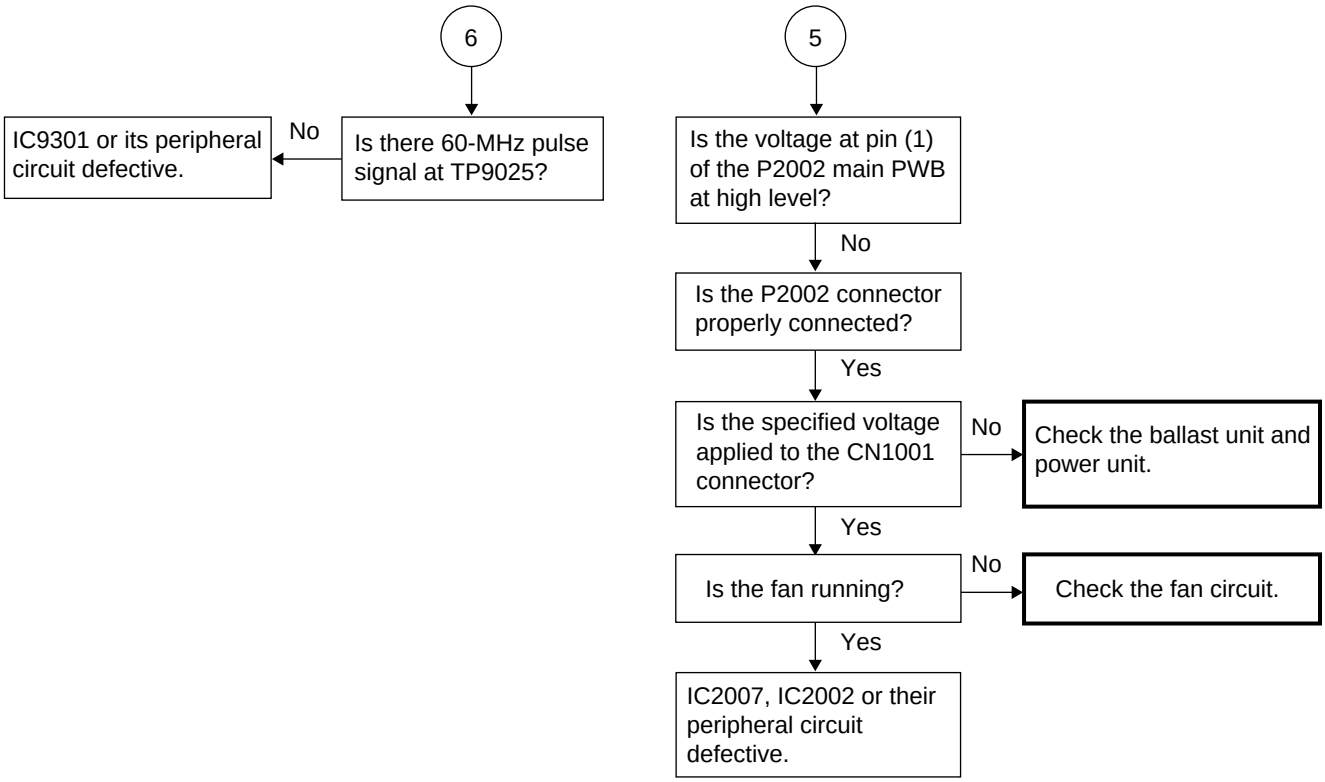

Check of component 15 pin D-sub input
Input the Component signal from INPUT 1.
Select INPUT 1 with the keys on the main body or the remote control.
Is picture outputted?
Yes
Is the picture disturbed?
Yes
1
No
End.
No
Is the signal coming to the connector TD?
No
Check of the Terminal 2 PWB.
Yes
Is the picture signal coming to IC3102 (3) (4) (5)?
No
Check between the connector TD and IC3102.
Yes
Are IC3102 (76) (77) (78) outputting and the signals inputted to (73) (74) (75)?
No
Check IC3102 and around it.
Yes
3


Checking of Sync Signal
Is the horizontal synchronized signal on IC5001 (6) pin?
No
Yes
Is the vertical synchronized signal on IC5002 (6) pin?
No
Check the PWB of the signal input part.
Yes
Is the synchronized signal is outputted from IC5009, IC5005, IC5006, IC5007, IC5008?
No
Check each IC and the peripheral circuit of IC.
Yes
Is the vertical synchronized signal on IC6004 (31) pin?
No
Yes
Is the horizontal synchronized signal on IC6004 (30) pin?
No
Check IC6001, IC6002 and IC peripheral circuits.
Yes
Is the vertical synchronized signal on IC6004 (64) pin?
No
Yes
Is the horizontal synchronized signal on IC6004 (66) pin?
No
Failure of IC6004 and IC peripheral circuit.
Yes
Are the timing of both vertical and horizontal synchronized signals correct?
Yes
The sync signal is normal.
End of checking.
No
Is the signal generator (input source) correct?
No
Set the signal source appropriately.
Yes
2
IC8001 and its periphery is defective.

- Formatter Unit Troubleshooting -1/2


Abnormal picture
Rainbow-like colors on-screen.
No proper matching in red, green and blue.
Adjustments made on "PROCESS MENU"→ "DLP"→"INDEX", but correction impossible.
Yes
IC9003 and/or IC9004 defective.
Blackout
No
Are connections made properly with the SC9101 and SC9001 sockets?
Is the color wheel running?
Yes
No
Is the specified voltage applied to the P9002 connector?
No
Check the main PWB and power unit.
Yes
Is the voltage at the positive-polarity pin of C9308 as specified (+5V)?
No
IC9301 or its peripheral circuit defective.
Yes
IC9101, IC9102 or their peripheral circuit, or color wheel defective.
Is a lamp turned on?
No
5
Yes
Is there 150-Hz pulse signal at pin (2) of P9003 with no signal input?
No
Check the color wheel sensor PWB.
Yes
Is the voltage at pin (9) of IC9301 as specified (+23 to +26V)?
No
Yes
Is the voltage at pin (13) of IC9301 as specified (-26V)?
No
IC9301 or its peripheral circuit defective.
Yes
Is the voltage at pin (49) of IC9301 as specified (+7V)?
No
Yes
6
Others
No
Is connection made properly with the SC9001 socket?
Yes
Is the voltage at pin (3) of IC9007 as specified (+2.5V)?
Yes
Are there 400-MHz sine-wave signals at pins (18) and (20) of IC9001?
No
IC9001 or its peripheral circuit defective.
Yes
IC9003, IC9004, IC9006 or their peripheral circuit defective.
Thick, white vertical stripes (flashing).
No
Are there dust deposits on DMD, formatter board and cLGA contact terminal?
Yes
Refit the DMD, optical mechanism and formatter board PWB.

- Formatter Unit Troubleshooting-2/2


6
5
IC9301 or its peripheral circuit defective.
No
Is there 60-MHz pulse signal at TP9025?
Is the voltage at pin (1) of the P2002 main PWB at high level?
No
Is the P2002 connector properly connected?
Yes
Is the specified voltage applied to the CN1001 connector?
No
Check the ballast unit and power unit.
Yes
Is the fan running?
No
Check the fan circuit.
Yes
IC2007, IC2002 or their peripheral circuit defective.

Technische Daten

Produkttyp	Theator Projector
Modell	XV-Z90E, XV-Z91E
Videosystem	PAL/PAL 60/PAL-M/PAL-N/SECAM/NTSC 3.58/NTSC 4.43 DTV 480I/480P/720P/1080I
Display-Verfahren	DLP-CHIP, RGB optisches Verschlussverfahren
DLP-Feld	Feldformat: 0,55" Anzeigemethode: Einzel-Bedienungsfeld-Digital Micromirror Device (DMD™) von Texas Instruments Ansteuerungsmethode: Digital Light Processing (DLP™) Anzahl der Punkte: 480.000 Punkte (800 [H] x 600 [V])
Linse	1 —1,2 X Zoom-Linse, F1,75—2,04, f=28—32,5 mm (XV-Z90E), F2—2,4, f=16,9—20,2 mm (XV-Z91E)
Projektionslampe	150 W SHP-Lampe
Videoeingangssignal	RCA-Stecker: VIDEO (INPUT 4), Gemischtes Video, 1,0 Vp-p, Synch. negativ, 75 Ω terminiert
S-Videoeingangssignal	4-Pin Mini DIN-Stecker (INPUT 3) Y (Luminanz-Signal): 1,0 Vp-p, Synch. negativ, 75 Ω terminiert C (Chrominanz-Signal): Stoß 0,286 Vp-p, 75 Ω terminiert
Komponenten-Eingangssignal (EING. 1)	RCA-Stecker Y: 1,0 Vp-p, Synch. negativ, 75 Ω terminiert P_B: 0,7 Vp-p, 75 Ω terminiert P_R: 0,7 Vp-p, 75 Ω terminiert
Komponenten-Eingangssignal (EING. 2)	15-Pin Steckverbinder Analog 0,7 Vp-p 75 Ω Y: 1,0 Vp-p, Synch. negativ, 75 Ω terminiert P_B: 0,7 Vp-p, 75 Ω terminiert P_R: 0,7 Vp-p, 75 Ω terminiert
Komponenten-RGB-Eingangssignal (EING. 2)	15-Pin Steckverbinder RGB, separate/Synch an Grün Typ, Analogeingang: 0—0,7 Vp-p, positiv, 75 Ω terminiert HORIZONTAL-SYNCH.-SIGNAL: TTL-Pegel (pos./neg.) VERTIKAL-SYNCH.-SIGNAL: Gleich wie zuvor
Horizontal-Auflösung	520 TV-Zeilen (NTSC 3,58 Eingang)
RGB-Eingangssignal	15-PIN MINI D-SUB STECKANSCHLUSS (INPUT 2): RGB getrennt/gemischte Synch./Synch. auf Grün-Typ analoger Eingang: 0—0,7 Vp-p,positiv, 75 Ω terminiert HORIZONTALES SYNCH.-SIGNAL: TTL-Pegelsignal (positiv/negativ) oder gemischtes Synch.-Signal (nur Apple) VERTIKALES SYNCH.-SIGNAL: Wie oben
Punktetakt	12°V110 MHz
Vertikale Frequenz	43°V75 Hz
Horizontale Frequenz	15°V70 kHz
Computersteuerungs-Signal	9-Pin D-Sub-Steckanschluß (RS-232C-Eingangs-Port)
Nennspannung	100°V240 V Wechselstromspannung
Eingangsspannung	2,1 A
Nennfrequenz	50/60 Hz
Stromaufnahme	200 W
Wärmeabgabe:	750 BTU/Stunde
Betriebstemperatur	+5°C bis +35°C
Lagertemperatur	–20°C bis +60°C
Gehäuse	Kunststoff
I/R-Trägerfrequenz	38 kHz
Abmessungen (ca.)	368 x 153,8 x 327 mm (B X H x T) (einschließlich Drehständer) 368 x 118 x 327 mm (B x H x T) (nur Hauptgerät)
Gewicht (ca.)	4,3 kg (einschließlich Drehständer) 3,8 kg (nur Hauptgerät)
Mitgeliefertes Zubehör	Fernbedienung, Zwei AA-Batterien, Netzkabel, Computer-RGB-Kabel, 21-Pin RCAKonvertierungsadapter, Video-Kabel, Anschluß-Adbeckung, Schrauben für die Anschlussabdeckung, Linsenkappe (am Gehäuse befestigt), Linsenkappenriemen, Bedienungsanleitung
Ersatzteile	Lampeneinheit (Lampe/Gehäusemodul) (BQC-XVZ90+++1), Fernbedienung (RRMCGA099WJSA), AA-Batterien, Netzkabel für Europa, ausgenommen Großbritannien (QACCV4002CEZZ), Netzkabel für Großbritannien, Hongkong und Singapur (QACCBA012WJPZ), Netzkabel für Australien und Neuseeland (QACCL3022CEZZ), Computer-RGB-Kabel (QCNW-5050CEZZ), 21-Pin RCA-Konvertierungsadapter (QSOCZ0361CEZZ), Video-Kabel (QCNWGA001WJZZ), Anschluß-Abdeckung (GCOVAA116WJKA), Schrauben für die Anschlussabdeckung (XBBSN40P10000), Linsenkappe (CCAPHA004WJ01), Linsenkappenriemen (UBNDT0013CEZZ), Bedienungsanleitungen für 7 europäische Sprachen (TINS-A326WJZZ) / für Chinesisch, Koreanisch und Arabisch (TINS-A327WJZZ)

Dieser SHARP-Projektor verwendet einen DMD-Chip. Dieser hochentwickelte Chip beinhaltet 480.000 Pixel. Wie bei allen hochtechnologischen Elektronikgeräten wie großen Fernsehbildschirmen, Videosystemen und Videokameras, gibt es auch hier bestimmte akzeptable Toleranzen, denen das Gerät entsprechen muß.

Änderungen der technischen Daten ohne Ankündigung vorbehalten.

HINWEIS FÜR DAS WARTUNGSPERSONAL

ACHTUNG: UV-STRAHLUNG

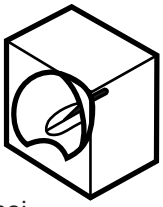
Die Lichtquelle im Projektor, eine Metall-Halogen-Lampe, gibt eine geringe UV-Strahlung ab.

DIREKTE BESTRAHLUNG AUF AUGEN UND HAUT MUSS VERMIEDEN WERDEN.

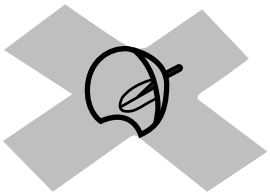
Zur Gewährleistung der Sicherheit muß folgendes beachtet werden:

1. Bei Arbeiten am Projektor bei eingeschalteter Lampe und abgenommenem oberen Gehäuse muß unbedingt eine Sonnenbrille getragen werden.

2. Die Lampe darf nicht außerhalb des Lampengehäuses eingeschaltet werden.



3. Betrieb für länger als 2 Stunden bei abgenommenem Gehäuse ist nicht zulässig.



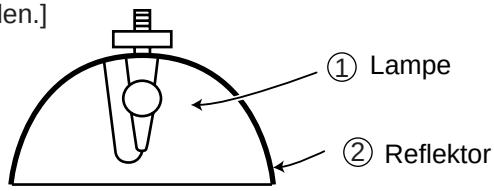
Zur Beachtung bei UV-Strahlung und Mitteldruck-Lampen

1. Vor dem Auswechseln der Lampe muß der Netzstecker gezogen werden.
2. Vor Durchführung von Wartungsarbeiten muß das Gerät eine Stunde abkühlen.
3. Nur mit dem gleichen Lampentyp ersetzen Typ BQC-XVZ90+++1; Nennleistung 370 V/150 W.
4. Die Lampe gibt eine geringe UV-Strahlung ab, daher muß direkter Augenkontakt vermieden werden.
5. Die Mitteldruck-Lampe weist ein Explosionsrisiko auf. Daher müssen die nachstehenden Installationsanweisungen beachtet werden, und die Lampe muß vorsichtig behandelt werden.

■ Auswechseln der Lampe

Hinweis:

Da die Lampe während des Betriebs sehr heiß wird, sollte die Lampe erst ausgewechselt werden, nachdem das Gerät mindestens eine Stunde ausgeschaltet war, damit die Lampe ausreichend abkühlen kann.
Beim Installieren der neuen Lampe muß darauf geachtet werden, die Lampe selbst (Glaskolben) nicht zu berühren. Vielmehr muß die Lampe am Reflektor ② gehalten werden.
[Es darf nur ein Original-Ersatzteil verwendet werden.]



GEFAHR! — Niemals die Spannungsversorgung einschalten, ohne daß eine Lampe vorhanden ist, um elektrische Schläge und Schäden am Gerät zu vermeiden, da der Stabilisator anfangs hohe Spannungen erzeugt.

Da eine geringe UV-Strahlung aus einer Öffnung zwischen der Schachtabdeckung und dem Lampengehäuse austritt, sollte der Objektivdeckel bei Wartungsarbeiten auf die Öffnung gesetzt werden, um die Bestrahlung von Augen und Haut zu vermeiden.

Hinweis: Besorgen Sie sich einen Objektivdeckel, bevor Sie Arbeiten an einem Modelle XV-Z90E/XV-Z91E durchführen, das keinen Objektivdeckel aufweist.

Vorsichtsmaßregeln für bleifreien Lötzinn

1 Verwendung von bleifreiem Lötzinn

Bei den Platinen für vorderen und hinteren Fernbedienungsempfänger, Terminal 1, Terminal 2 und Tasten dieses Modells wird bleifreies Lot verwendet. Das Symbol LF kennzeichnet bleifreies Lot und findet sich an den Platinen und in den Wartungshandbüchern. Der Buchstabe hinter LF bezieht sich auf die Art des bleifreien Lots.

Beispiel:

Zeigt bleifreien Lötzinn aus Zinn, Silber und Kupfer an.

2 Bei Reparatur der mit bleifreiem Lötzinn gelöteten Platine immer bleifreien Lötzinn verwenden. Reparatur mit herkömmlichem Lötzinn kann zu Schäden oder Unfällen aufgrund von Rissen führen.

Da der Schmelzpunkt bleifreien Lvtzinns (Sn-Ag-Cu) um 40°C höher als der von Bleidraht-Lötzinn ist, empfehlen wir die Verwendung einer speziellen Lötspitze. Wenn Fragen über den Beschaffung leitfreien Lötzinns oder spezieller Lötspitzen bestehen, wenden Sie sich an unsere Kundendienstvertretung in Ihrem Gebiet.

3 Löten

Da der Schmelzpunkt bleifreien Lötzinns (Sn-Ag-Cu) etwa 220°C beträgt, was um 40°C höher als der von bleihaltigem Lötzinn ist, und außerdem schlechte Löt-Benetzbarkeit aufweist, kann es erforderlich werden, die Lötspitze längere Zeit in Kontakt mit der Platine zu halten. Da die Lötlauge abfliessen kann oder der maximale Hitzewiderstand von Teilen überschritten werden kann, die Lötspitze sofort von der Platine nehmen, sobald eine gute Lötung erzielt ist. Bleifreier Lötzinn enth_lt mehr Zinn, und das Ende der Lötspitze kann leicht angegriffen werden. Immer sicherstellen, dass der Lötkolben nur bei Bedarf eingeschaltet wird.

Wenn ein anderer Typ von Lötzinn an der Lötspitze haften bleibt, verschmilzt er mit dem bleifreien Lötzinn. Die Lötspitze nach jeder Verwendung reinigen.

Wenn die Lötspitze bei der Verwendung geschwärzt wird, die Spitze mit Stahlwolle oder feinem Sandpapier abschmirgeln.

Immer beim Austausch von Teilen vorsichtig sein, und die Polaritätsanzeige auf der Platinenbeschriftung beachten.

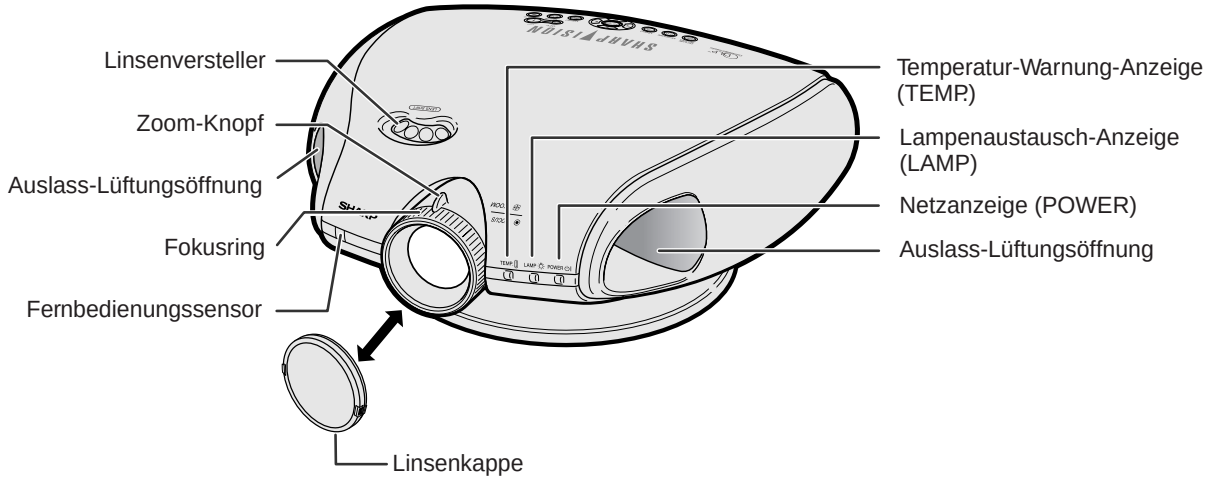
Bleifreier Lötzinn zur Wartung

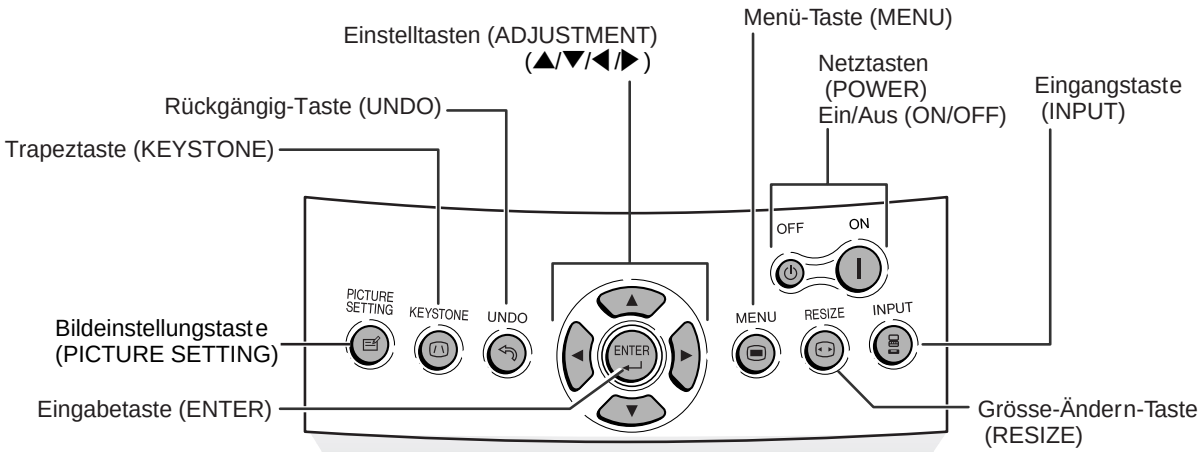
Teile-Nr.	★	Beschreibung		Code
ZHNDAi123250E	J	ϕ0.3mm	250g(1roll)	BL
ZHNDAi126500E	J	ϕ0.6mm	500g(1roll)	BK
ZHNDAi12801KE	J	ϕ1.0mm	1 Rolle	BM

Bedienelemente

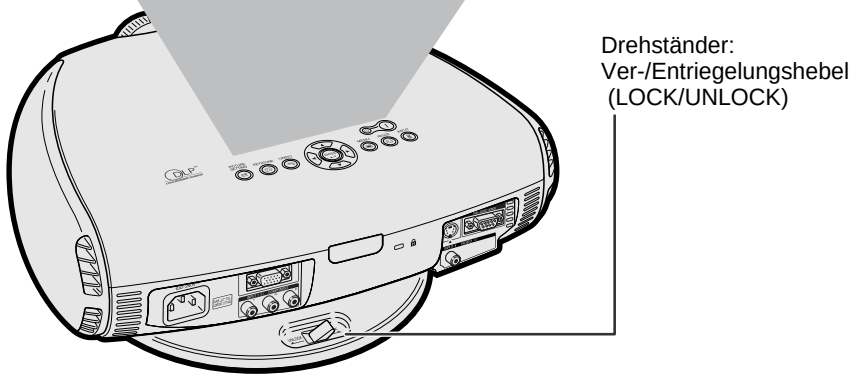
Projektor

Ansicht von vorne und oben



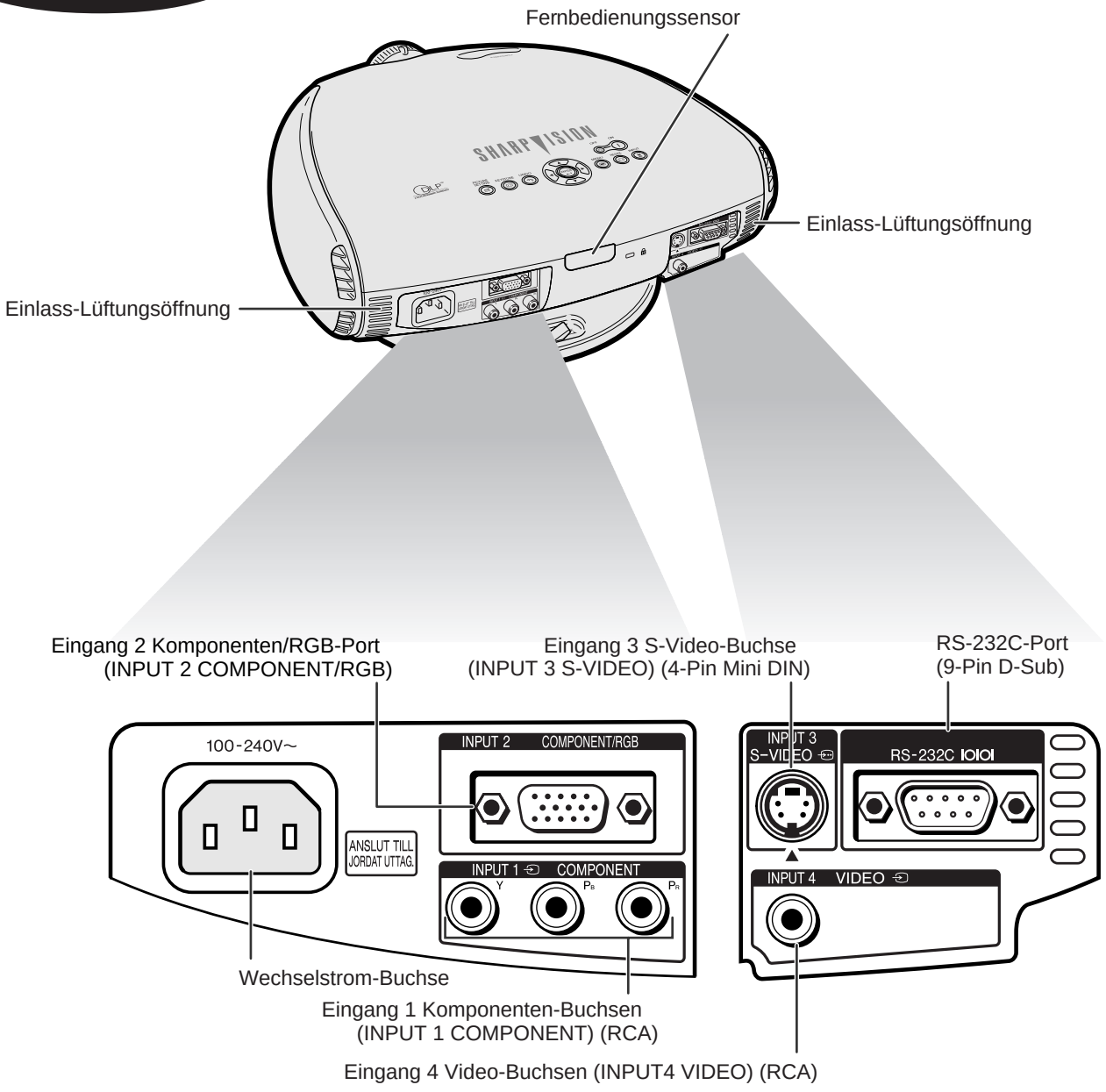


Seiten- und Rückansicht



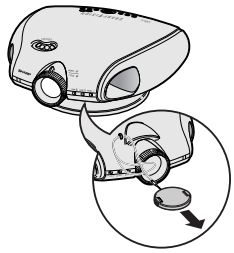
Projektor

Seiten- und Rückansicht



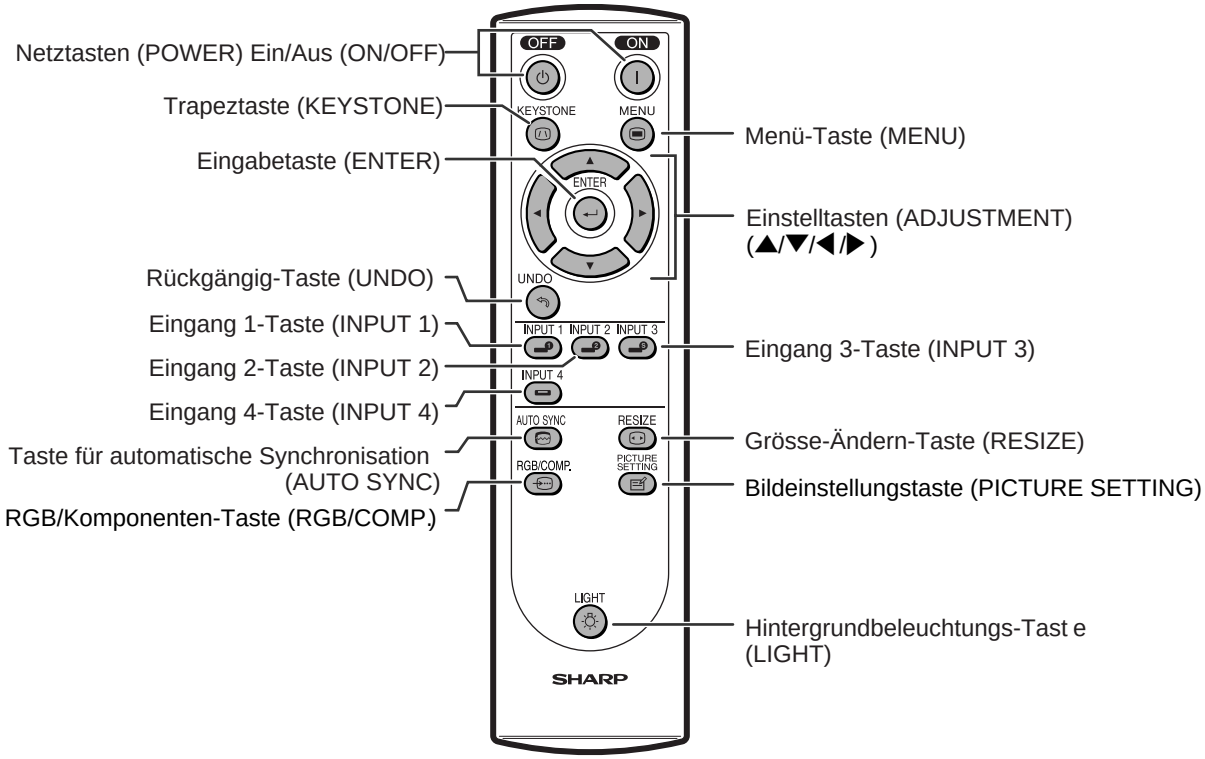
Anbringen der Linsenkappe

Nachdem Sie den Linsenkappenriemen an der Linsenkappe angebracht haben, schieben Sie das andere Ende des Riemens durch das Loch unter dem Projektor neben der Linse.

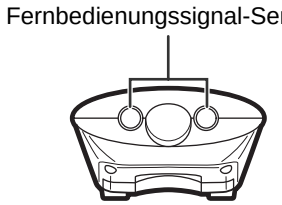


Fernbedienung

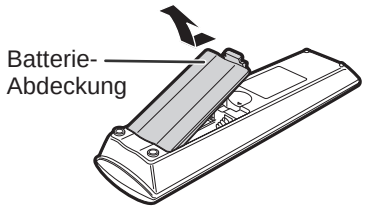
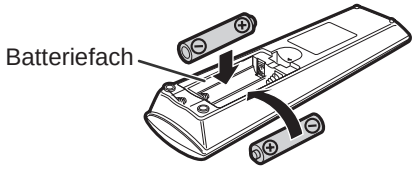
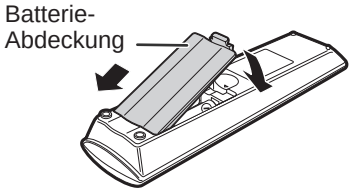
Vorderansicht



Ansicht von oben

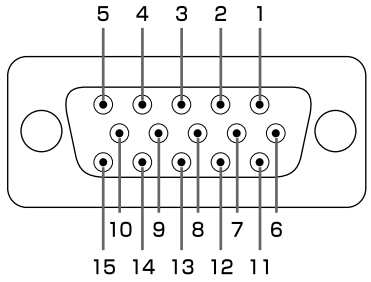


Einlegen der Batterien

1 **Ziehen Sie die Lasche auf der Batterieabdeckung nach unten und nehmen Sie die Abdeckung in Pfeilrichtung ab.**	**2** **Legen Sie zwei AA-Batterien unter Anpassung der im Batteriefach aufgezeigten (+)- und (–)-Markierungen ein.**	**3** **Setzen Sie die untere Lasche der Batterieabdeckung in die Öffnung ein und drücken Sie die Abdeckung herunter, bis sie einrastet.**
		

Pin-Belegung

INPUT 2 COMPONENT/RGB-Port: 15-Pin Mini-D-Sub-Buchse



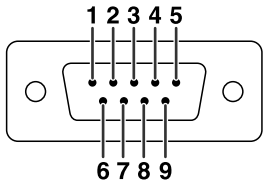
• RGB-Eingang

Pin Nr.	Signal	Pin Nr.	Signal
1	Videoeingang (rot)	9	Nicht angeschlossen
2	Videoeingang (Grün/Sync. auf Grün)	10	Erdung
3	Videoeingang (blau)	11	Erdung
4	Nicht angeschlossen	12	Bi-direktionale Daten
5	Gemischtes Sync.	13	Horizontales Sync.-Signal
6	Erdung (rot)	14	Vertikales Sync.-Signal
7	Erdung (Grün/Sync. auf Grün)	15	Daten-Zeitgeber
8	Erdung (blau)		

• Komponenten-Eingang

Pin Nr.	Signal	Pin Nr.	Signal
1.	Videoeingang P_R (C_R)	9.	Nicht angeschlossen
2.	Videoeingang Y	10.	Nicht angeschlossen
3.	Videoeingang P_B (C_B)	11.	Nicht angeschlossen
4.	Nicht angeschlossen	12.	Nicht angeschlossen
5.	Nicht angeschlossen	13.	Nicht angeschlossen
6.	Erdung (P_R)	14.	Nicht angeschlossen
7.	Erdung (Y)	15.	Nicht angeschlossen
8.	Erdung (P_B)		

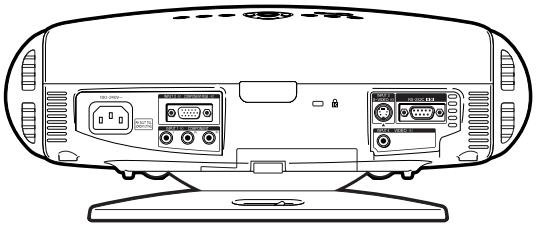
RS-232C-Port: 9-Pin D-Sub-Stecker des DIN-D-Sub RS-232C-Kabels



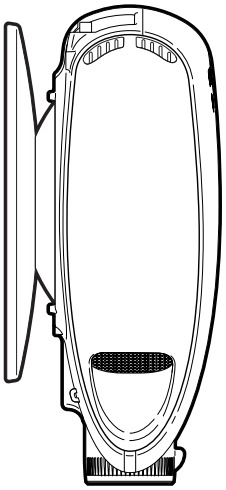
Pin Nr.	Signal	Name	E/A	Referenz
1				Nicht angeschlossen
2	RD	Daten empfangen	Eingang	An internen Schaltkreis angeschlossen
3	SD	Daten senden	Ausgang	An internen Schaltkreis angeschlossen
4		Reserviert		An internen Schaltkreis angeschlossen
5	SG	Signalerdung		An internen Schaltkreis angeschlossen
6		Reserviert		An internen Schaltkreis angeschlossen
7		Reserviert		An internen Schaltkreis angeschlossen
8		Reserviert		An internen Schaltkreis angeschlossen
9				Nicht angeschlossen

Abmessungen

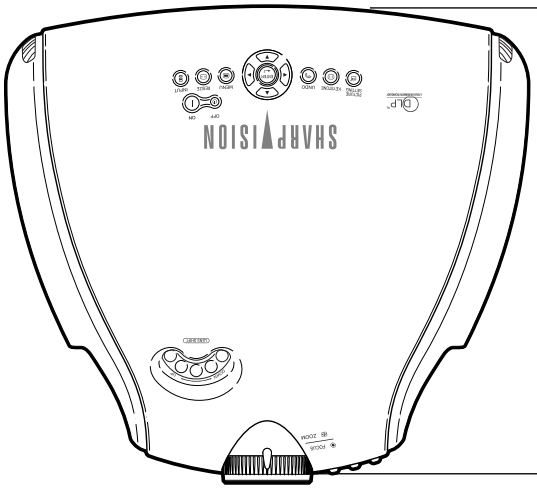
Ansicht der Rückseite



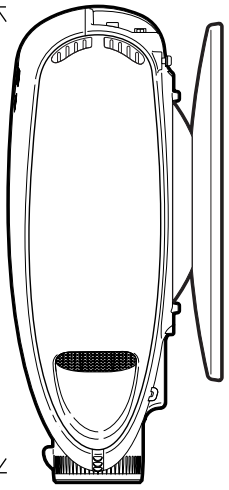
Seitenansicht



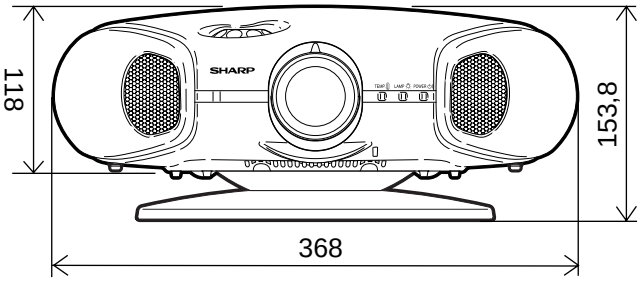
Ansicht von oben



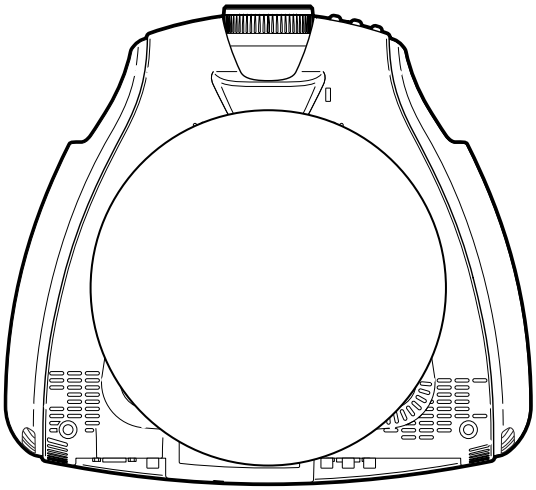
Seitenansicht



Ansicht von vorne



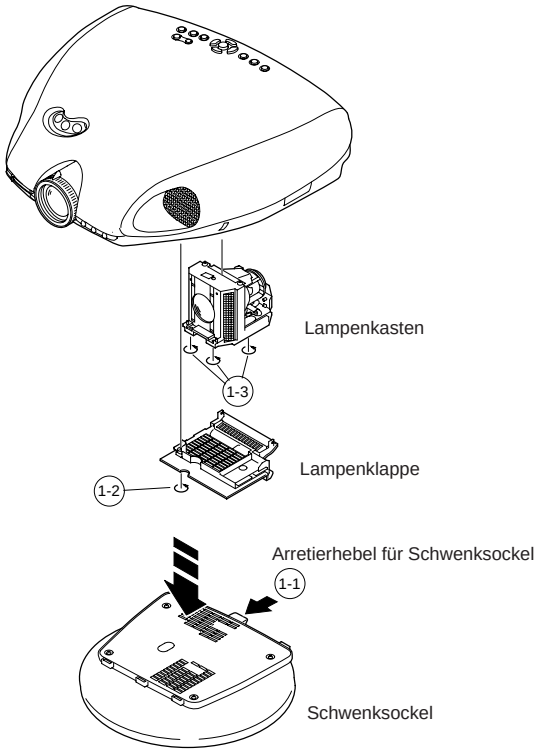
Ansicht von unten



Einheit: mm

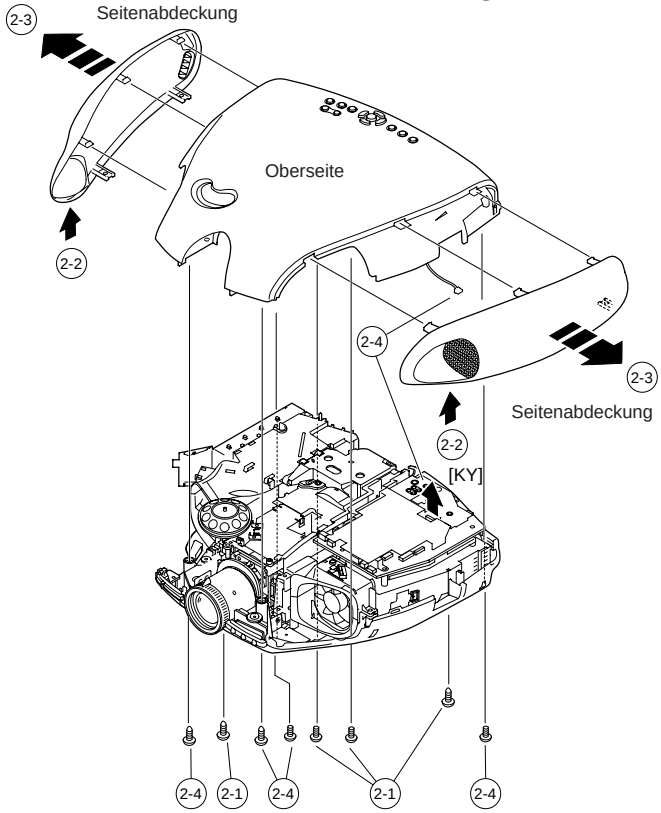
ENTFERNEN DER HAUPTTEILE

1. Ausbau von Schwenksockel und Lampenkasten



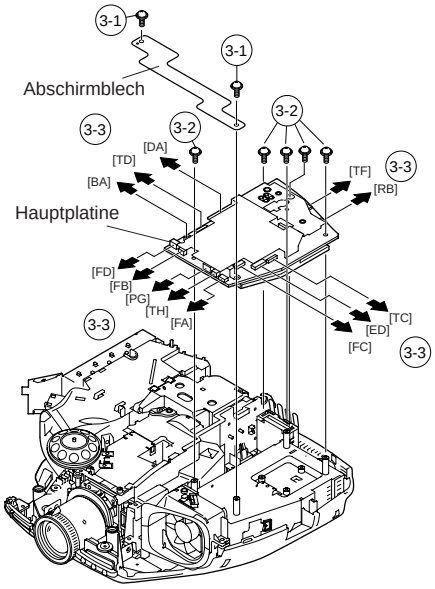
1-1. Den Arretierhebel freigeben und den Schwenksockel abnehmen.
1-2. Die 1 Schraube losdrehen und die Lampenklappe abnehmen.
1-3. Die 3 Schrauben losdrehen und den Lampenkasten herausnehmen.

2. Ausbau von Seitenabdeckungen und Oberseite



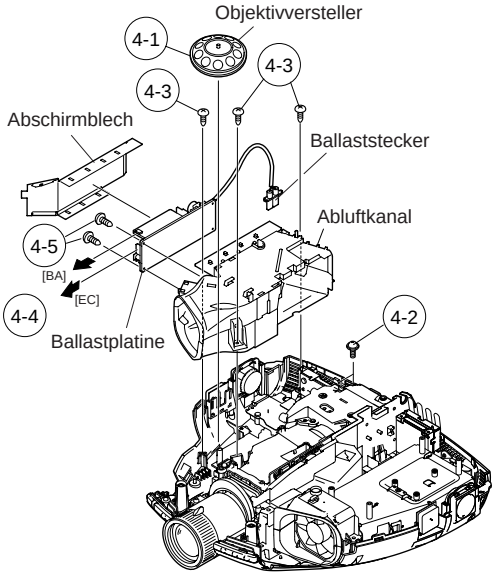
2-1. Die 4 Schrauben herausdrehen.
2-2. Von der Unterseite aus auf das Vorderende der Seitenabdeckung drücken und einen Haken lösen.
2-3. Die Seitenabdeckung in Pfeilrichtung abziehen.
2-4. Die 4 Schrauben herausdrehen, den Steckverbinder abziehen und die Oberseite abnehmen.

3. Ausbau der Hauptplatine



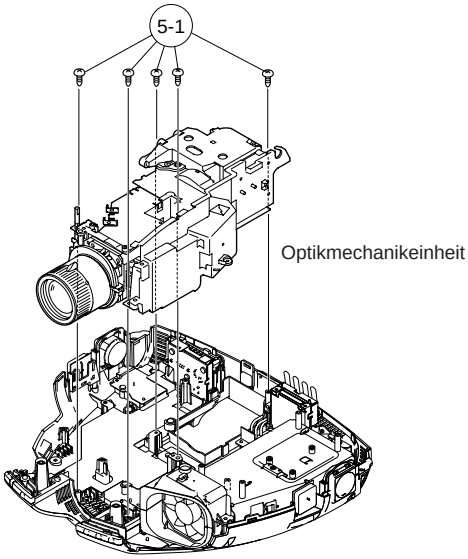
3-1. Die 2 Schrauben herausdrehen und das Abschirmblech abnehmen.
3-2. Die 5 Schrauben herausdrehen.
3-3. Die einzelnen Steckverbinder von der Hauptplatine abziehen.

4. Ausbau der Ballasteinheit



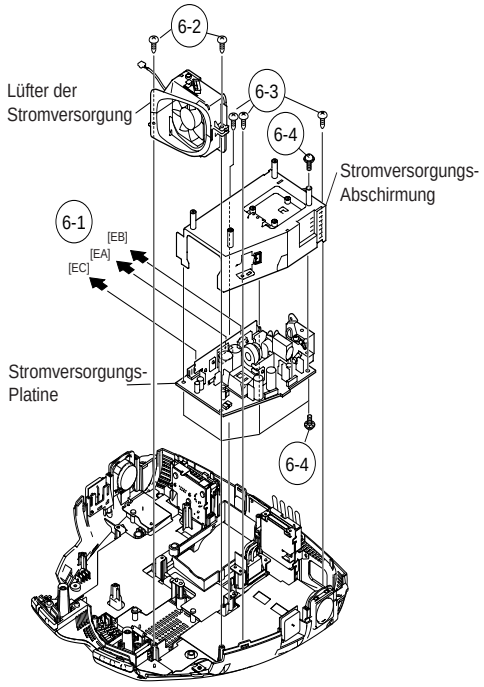
4-1. Den Objektivversteller ausbauen.
4-2. Die 2 Schrauben herausdrehen und den Ballaststecker abziehen.
4-3. Die 3 Schrauben herausdrehen und den Abluftkanal abnehmen.
4-4. Das Abschirmblech abnehmen und die 2 Steckverbinder an der Ballastplatine abziehen.
4-5. Die 2 Schrauben herausdrehen und die Ballastplatine abnehmen.

5. Ausbau der Optikmechanikeinheit.



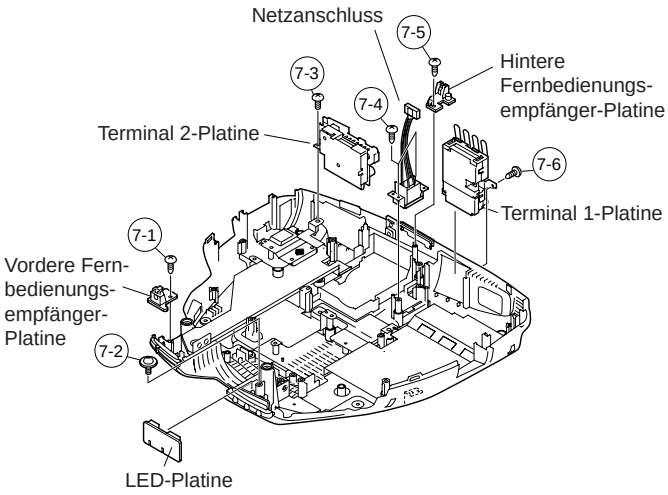
5-1. Die 5 Schrauben herausdrehen und die Optikmechanikeinheit abnehmen.

6. Ausbau der Stromversorgung



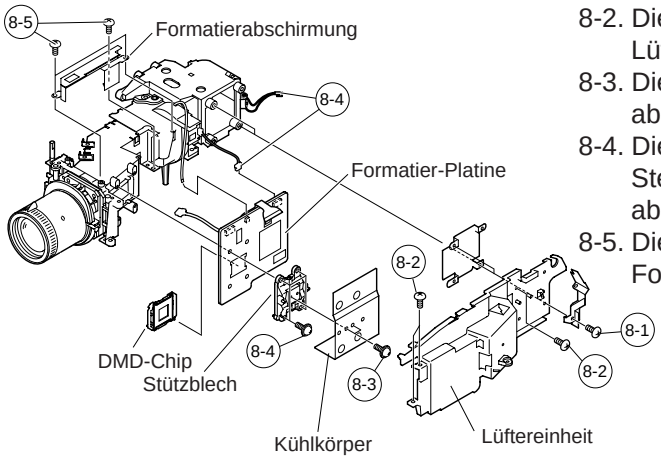
6-1. Die einzelnen Steckverbinder von der Stromversorgungs-Platine abziehen.
6-2. Die 2 Schrauben herausdrehen und den Lüfter der Stromversorgung abnehmen.
6-3. Die 3 Schrauben herausdrehen und die Stromversorgungseinheit herausnehmen.
6-4. Die 5 Schrauben herausdrehen und die Stromversorgungs-Abschirmung abnehmen.

7. Ausbau der übrigen Platinen



7-1. Die 1 Schraube herausdrehen und die vordere Fernbedienungsempfänger-Platine abnehmen.
7-2. Die 1 Schraube herausdrehen und die LED-Platine abnehmen.
7-3. Die 1 Schraube herausdrehen und die Terminal 2-Platine abnehmen.
7-4. Die 2 Schrauben herausdrehen und den Netzschalter abnehmen.
7-5. Die 1 Schraube herausdrehen und die hintere Fernbedienungsempfänger-Platine abnehmen.
7-6. Die 1 Schraube herausdrehen und die TEERMINAL 1-Platine abnehmen.

8. Ausbau der Formatier-Platine

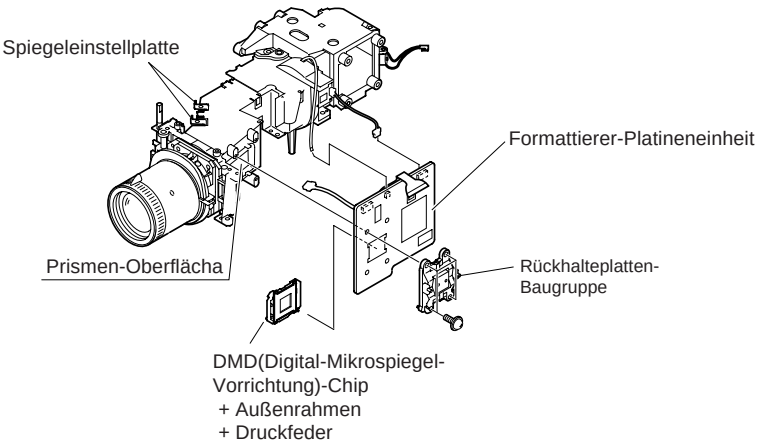


8-1. Die 1 Schraube herausdrehen und den Haltewinkel abnehmen.
8-2. Die 3 Schrauben herausdrehen und die Lüftereinheit abnehmen.
8-3. Die 2 Schrauben herausdrehen und den Kühlkörper abnehmen.
8-4. Die 4 Schrauben herausdrehen, die beiden Steckverbinder abziehen und die Formatier-Platine abnehmen.
8-5. Die 2 Schrauben herausdrehen und die Formatierabschirmung abnehmen.

Vorsichtsmaßregeln zur Auswechslung des DMD (Digital-Mikrospiegel-Vorrichtung) -Chips

Hinweis: Sicherstellen, daß sich keine Staube und Fingerabdrücke auf dem Deckglas des DMD-Chips und der Prismen-Oberfläche des Optikapparats zurücklassen.

1. Beim Festziehen der 4 Schrauben der Rückhalteplatten-Baugruppe die Rückhalteplatte auf die Formatier-Platine niederdrücken und die Schrauben diagonal festziehen.
2. Falls ein Schatten auf dem Projektionsschirm erscheint, wie in der Abbidlung 1, die beide Schrauben von der Spiegeleinstellplatte lockern und diese Platte bewegen, um das Leuchtfeld des DMD-Chips einzustellen.



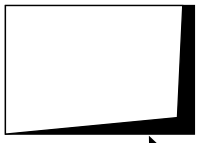
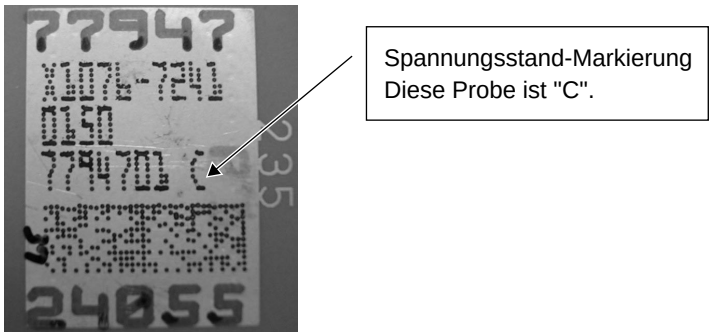


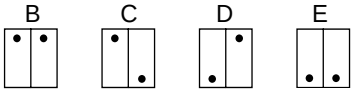
Abbildung 1 — Schatten

*** Vorsichtsmaßregeln zur Einrichtung der DMD(Digital-Mikrospiegel-Vorrichtung)-Einheit**

Vor dem Anschließen der Formatierer-Platine an den Optikapparat die folgenden Schritte ausführen. Die Spannngsrang-Markierung am DMD selber prüfen. Entsprechend dieser Markierung die DIP-Schalter an der Formatier-Platine einstellen. Danach diese Platine an den Optikapparat anschließen. Falsche Einstellungen beeinträchtigen die Systemleistung.

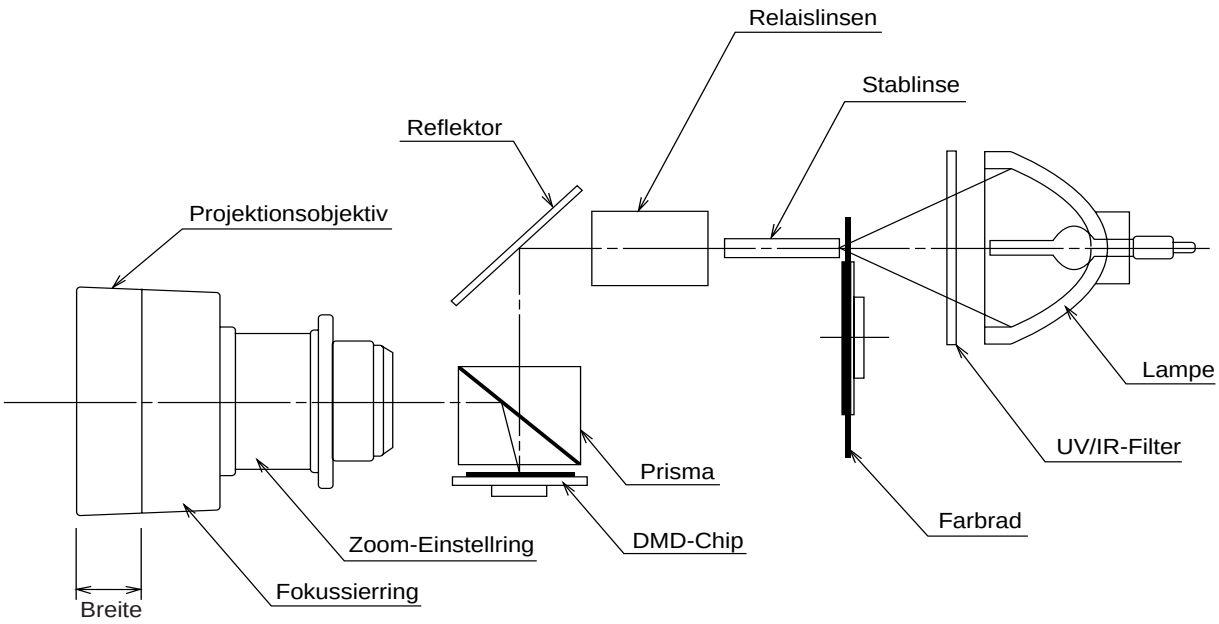


Einstellung des Spannungseinstufungs-Systems an der Formatier-Platine



Kurzbeschreibung des Optikapparats

<Layout>



Gegenstand	Funktion
Lampe	Lichtquelle. Gleichstrombetriebene Hochdruck-Quecksilberdampflampe.
UV/IR-Filter	Zur Absorption von Ultraviolett- und Infrarotstrahlen.
Farbrad	Dient zum Durchlassen der Lichtquelle durch den Farbfilter und Aufspalten in die Farben R, G und B.
Stablinse	Dient zur Erzeugung uniformer Lichtstrahlen.
Relaislinsen	Dienen zum Sammeln des Lichts von der Stablinse in den DMD-Chip.
Reflektor	Dient zum Reflektieren des Lichts von der Relaislinse gegen den DMD-Chip.
Prism	Dient zum Einführen des Lichts vom Reflektor über die Effektivoberfläche des DMD-Chips. Wenn der Mikrospiegel gekippt wird (EIN) wie vorgeschrieben, wird das reflektierte Licht zur Projektionslinse geführt.
DMD-Chip	Dient zum Einschalten und Ausschalten des Mikrospiegels als Reaktion auf das Verhältnis der Farbkomponenten bei jedem Punkt und deshalb zur entsprechenden Reflektion des einfallenden Lichts.
Projektionsobjektiv	Dient zum Vergrößern des Lichts vom DMD-Chip und zur Projektion des Lichts auf den Schirm.

Unterscheidung zwischen Linsen mit langer und kurzer Brennweite

- Linse mit langer Brennweite, Fokussierringbreite: ca. 18 mm ▶ XV-Z90E
- Linse mit kurzer Brennweite, Fokussierringbreite: ca. 27 mm ▶ XV-Z91E

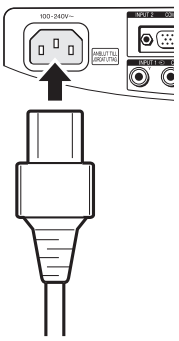
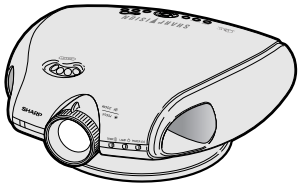
Vorsicht während Reparaturen bei abgenommener Oberseite

Zur Reparatur dieses Geräts ohne Oberseite zunächst die linke Seitenabdeckung anbringen. (Da sonst die Abwärme in das Geräteinnere geleitet und bei Erfassung durch den Tempertursensor ein TEMP-Fehler ausgelöst und die Lampe ausgeschaltet wird.)

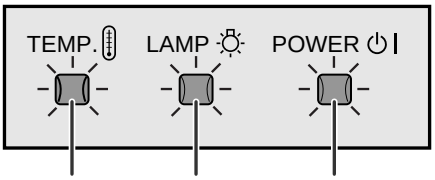
RÜCKSTELLUNG DES LAMPEN-TIMERS

Der Lampen-Betriebsstundenzähler muß nach jedem Lampenaustausch zurückgesetzt werden. Dies muß dann im „Lamp Timer“-Menü (Lampen-Betriebsstundenzähler) bestätigt werden.

Rückstellen des Lampenbetriebszeit-Timers

1 Das Netzkabel wieder einstecken.	**2** Zur Rückstellung des Lampen-Timers am Projektor POWER ON drücken.
	In dieser Reihenfolge ON, INPUT, UNDO, ◄, ENTER und ► drücken. Dann ON drücken.  „LAMP. 0000H“ wird auf dem Projektionsbild angezeigt.

Wartungsanzeigen



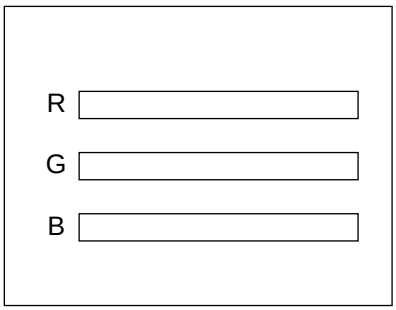
- Die Warnanzeigen auf dem Projektor weisen auf Fehlfunktionen im Inneren des Projektors hin.
- Es gibt zwei verschiedene Warnlicht-Typen: a Die TEMP.-Anzeige (Temperatur-Warnung) warnt Sie, wenn der Projektor zu heiß ist, und die LAMP-Anzeige (Lampenaustausch) macht Sie darauf aufmerksam, daß die Lampe ausgetauscht werden muss.
- Im Falle einer Störung leuchtet entweder die TEMP.-Anzeige (Temperatur-Warnung) oder die LAMP-Anzeige (Lampenaustausch) rot auf. Verfahren Sie nach dem Ausschalten der Stromversorgung wie nachfolgend beschrieben.

Wartungsanzeige	Symptom	Problem	Abhilfe
TEMP.-Anzeige (Temperatur-Warnung)	Die Temperatur im Gerät ist zu hoch.	• Belüftungsöffnungen blockiert.	• Den Projektor an einem besser belüfteten Ort aufstellen.
		• Verstopfte Belüftungsöffnungen	• Lüftungsöffnungen reinigen.
		• Kühlventilator beschädigt. • Interne Schaltkreise beschädigt.	• Den Projektor einem von Sharp autorisierten Händler für Projektoren oder dem Kundendienst zur Reparatur übergeben.
LAMP-Anzeige (Lampenaustausch)	Die Lampe leuchtet nicht auf.	• Ausgebrannte Lampe. • Lampen-Schaltkreis beschädigt.	• Die Lampe vorsichtig austauschen. • Den Projektor einem von Sharp autorisierten Händler für Projektoren oder dem Kundendienst zur Reparatur übergeben.
	Die Lampe muß ausgewechselt werden.	• Die Lampe wurde über 2.400 Stunden verwendet.	

HINWEIS

- Wenn die TEMP.-Anzeige (Temperatur-Warnung) aufleuchtet, sollten die obigen Abhilfen befolgt und dann gewartet werden, bis der Projektor vollständig abgekühlt ist, bevor das Gerät wieder eingeschaltet wird. (Mindestens 5 Minuten.)
- Wenn das Gerät ausgeschaltet und dann nach einer kurzen Pause wieder eingeschaltet wird, können die LAMP-Anzeige (Lampenaustausch) aktiviert werden und dadurch das Einschalten des Gerätes verhindern. In diesem Fall sollte der Netzstecker von der Steckdose abgetrennt und erneut angeschlossen werden.

ELEKTRISCH EINSTELLUNG

Nr.	Einstellposten	Einstellbedingungen	Einstellverfahren
1	Initialisierung des EEPROM	1. Das Gerät einschalten (Lampe leuchtet auf) und das System für 15 Minuten aufwärmen lassen.	1. Folgende Einstellungen ausführen. Den Prozessmodus über die Fernbedienung oder Taste S2002 einschalten und im SS-Menü Option SS2 ausführen.
2	Adjustment of CW index	1. RGB-Gradationsmuster eingeben. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DLP Posten: CW-INDEX anwählen.	1. Den Posten anwählen und Einstellungen vornehmen, so daß die Lampen-Abstufungsmuster von R, G und B weich und störungsfrei erscheinen. 
3-1	Einstellung von R-Helligkeit/Kontrast	1. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: AD Posten: R-Bright R-Contrast 2. Das Fenster-Muster mit 91-%- (0,64 Vss) und 0-%-R-Signal zuführen (Prozess-Gamma-Verriegelung).	1. Auf dem bitlosen Schirm bei der Einstellung folgende Abfolge einhalten: R-Helligkeit auf der Schwarz-Seite und R-Kontrast auf der Weiß-Seite. Den Schwarzpegel so einstellen, dass der hellrote bitlose Schirm verschwinden bzw. fast verschwinden kann. Den Weißpegel so einstellen, dass der rote bitlose Schirm von Schwarz aus erscheinen kann.
3-2	Einstellung von G-Helligkeit/Kontrast	1. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: AD Posten: G-Bright G-Contrast 2. Das Fenster-Muster mit 91-%- (0,64 Vss) und 0-%-G-Signal zuführen (Prozess-Gamma-Verriegelung).	1. Auf dem bitlosen Schirm bei der Einstellung folgende Abfolge einhalten: G-Helligkeit auf der Schwarz-Seite und G-Kontrast auf der Weiß-Seite. Den Schwarzpegel so einstellen, dass der hellgrüne bitlose Schirm verschwinden bzw. fast verschwinden kann. Den Weißpegel so einstellen, dass der rote bitlose Schirm von Schwarz aus erscheinen kann.

Nr.	Einstellposten	Einstellbedingungen	Einstellverfahren
3-3	Einstellung von B-Helligkeit/Kontrast	1. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: AD Posten: B-Bright B-Contrast 2. Das Fenster-Muster mit 91-%- (0,64 Vss) und 0-%-B-Signal zuführen (Prozess-Gamma-Verriegelung).	1. Auf dem bitlosen Schirm bei der Einstellung folgende Abfolge einhalten: B-Helligkeit auf der Schwarz-Seite und B-Kontrast auf der Weiß-Seite. Den Schwarzpegel so einstellen, dass der hellblaue bitlose Schirm verschwinden bzw. fast verschwinden kann. Den Weißpegel so einstellen, dass der rote bitlose Schirm von Schwarz aus erscheinen kann.
4	Einstellung von DTV-Helligkeit/ Kontrast	1. Ein 480P 100-%-Schwarzweiß-Fenstermustersignal zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DTV Posten: Bright Contrast (Prozess-Gamma-Verriegelung)	1. Auf dem bitlosen Schirm bei der Einstellung folgende Abfolge einhalten: Helligkeit auf der Schwarz-Seite und Kontrast auf der Weiß-Seite. Den Schwarzpegel so einstellen, dass der hellgrüne bitlose Schirm verschwinden bzw. fast verschwinden kann. Den Weißpegel so einstellen, dass der rote bitlose Schirm von Schwarz aus erscheinen kann.
5	Einstellung auf DTV-Farbton	1. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DTV Posten: Tint	1. Den festgelegten Wert bestätigen. Tint: 8
6	Einstellung der DTV-Farbsättigung	1. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DTV Posten: Colour	1. Den festgelegten Wert bestätigen. Colour: 13
7	Einstellung von DTV-Helligkeit/ Kontrast	1. Ein 480I 10STEP-Signal (ohne Einstellung) zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DVD Posten: Bright Contrast (Prozess-Gamma-Verriegelung)	1. Auf dem bitlosen Schirm bei der Einstellung folgende Abfolge einhalten: Helligkeit auf der Schwarz-Seite und Kontrast auf der Weiß-Seite. Den Schwarzpegel so einstellen, dass der hellgrüne bitlose Schirm verschwinden bzw. fast verschwinden kann. Den Weißpegel so einstellen, dass der rote bitlose Schirm von Schwarz aus erscheinen kann.
8	Einstellung auf DVD Farbton	1. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DVD Posten: Tint	1. Den festgelegten Wert bestätigen. Tint: 4

Nr.	Einstellposten	Einstellbedingungen	Einstellverfahren
9	Einstellung der DVD-Farbsättigung	1.Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DVD Posten: Color	1. Den festgelegten Wert bestätigen. Color: 10
10	Einstellung für Video/ Helligkeitskontrast	1. Ein NTSC 10STEP-Signal (ohne Einstellung) zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: VIDEO Posten: AUTO (Prozess-Gamma-Verriegelung)	1. Den Einstellwert der Helligkeit auf denselben Wert wie die DVD-Helligkeit einstellen. 2. Auf dem bitlosen Schirm bei der Einstellung folgende Abfolge einhalten: Helligkeit auf der Schwarz-Seite und Kontrast auf der Weiß-Seite. Den Weißpegel so einstellen, dass der rote bitlose Schirm von Schwarz aus erscheinen kann.
11	Einstellung auf Video-Farbton	1. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: VIDEO Posten: N-Tint P-Tint S-Tint	1. Den festgelegten Wert bestätigen. N-Tint: 4 P-Tint: 4 S-Tint: 4
12	Einstellung der VIDEO-Farbsättigung	1. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: VIDEO Posten: N-Color P-Color S-Color	1. Den festgelegten Wert bestätigen. N-Color: 10 P-Color: 10 S-Color: 10
13	Automatische Einstellung der DTV-Weißbalance	1. Ein 480P 75-%-Grausignal zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DTV Posten: R-DRIVE(R) B-DRIVE(B)	1. Den festgelegten Wert bestätigen. R-DRIVE: 41 B-DRIVE: 41 (x=291, y=320)

Einstellung beim Zusammenbau

Nr.	Einstellposten	Einstellbedingungen	Einstellverfahren
14	Einstellung der DLP-Spannung (für Referenz)	1. Den Spannungsbereich der DLP-Beschreibung lesen. 2. Den Schalter gemäß dem abgelesenen Bereich einstellen (auf der Formatierungsplatine).	1. Die Einstellung durchführen, wenn der DLP-Chip ausgewechselt oder die Chip-/Formatiererkombination verändert wurde. 2. Reihe: B C D E Einstellwert: 1 2 3 4

Bestätigung

Nr.	Einstellposten	Einstellbedingungen	Einstellverfahren
15	Bestätigung und Neueinstellung der Weißbalance	Die Einstellbedingungen von Parameter 13 bei DTV-Eingabe	Sicherstellen, dass der Weißabgleich optimal ist. Bei Neueinstellung nur DVD-Eingabe ausführen.
16	Bestätigung der farbbezogenen Operation	1. Das Farbbildsignal empfangen.	1. L1 im Prozeßmodus empfangen. Die Leistung von Farbe und Tönung überprüfen.
17	Bestätigung der farbbezogenen Operation	1. Das Monoskop-Mustersignal empfangen.	1. L2 im Prozeßmodus empfangen. Das Bild, die Bildhelligkeit und die Bildschärfe überprüfen.
18	Bestätigung von RGB	1. Das RGB-Signal empfangen.	1. L4 im Prozeßmodus anwählen. Folgendes überprüfen: Bild, Bildhelligkeit, Rot, Blau, Takt, Phase, H-POS und V-POS.
19	Bestätigung des Off-Timer-Betriebs		1. OFF im Prozeßmodus anwählen. Sicherstellen, daß der Off-Timer mit einer 5minütigen Anzeige beginnt, 1 Minute für 1 Sekunde zählt und dann ausschaltet, nachdem die Minute “0” angezeigt wird.
20	Bestätigung des Thermistorbetriebs	1. Den Thermistor mit einem Haarfön erwärmen.	1. Sicherstellen, daß die Temperatur angezeigt wird.
21	Automatischer Synchronisationsbetrieb	1. Das Phasen-Prüfmustersignal empfangen.	1. Sicherstellen, daß Takt, Phase, H-POS und V-POS automatisch im VGA/S-VGA/XGA-Modus eingestellt werden können.
22	Werkseinstellungen		1. Die folgenden Einstellungen durchführen. Prozeß-Einstellung: SS3 Fernbedienung-seinstellungen: "Werkseinstellung 3"

● Eingabe des Einstellprozeßmodus

Es gibt die folgenden zwei Verfahren.

- Den SW2001 an der Tastenplatinen-Einheit drücken.
- Die folgenden Tasten in der vorgeschriebenen Reihenfolge betätigen.

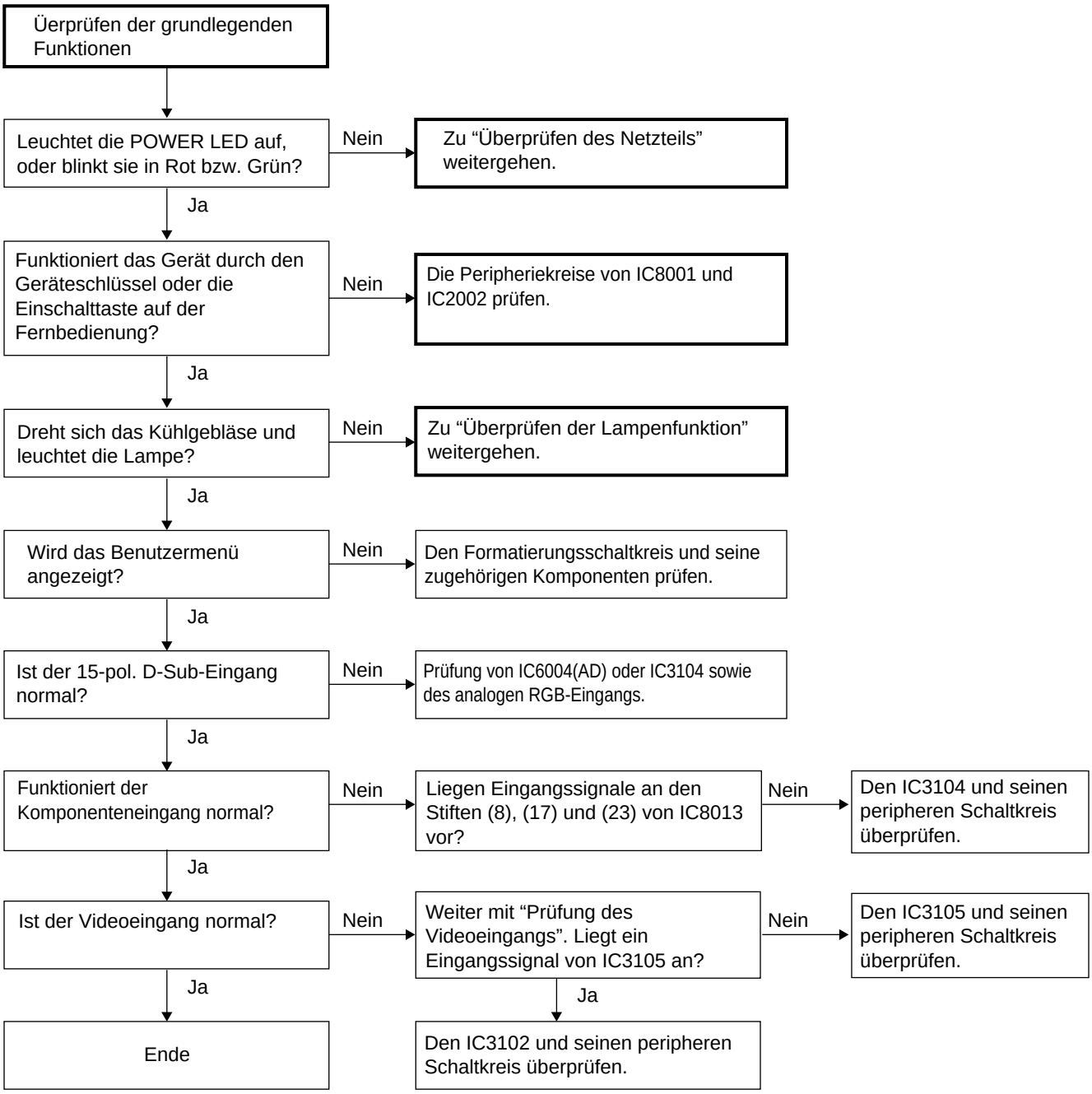
Einstell oben→Einstell oben→Einstell unten→Einstell unten→Einstellung rechts→Einstellung links→ENTER

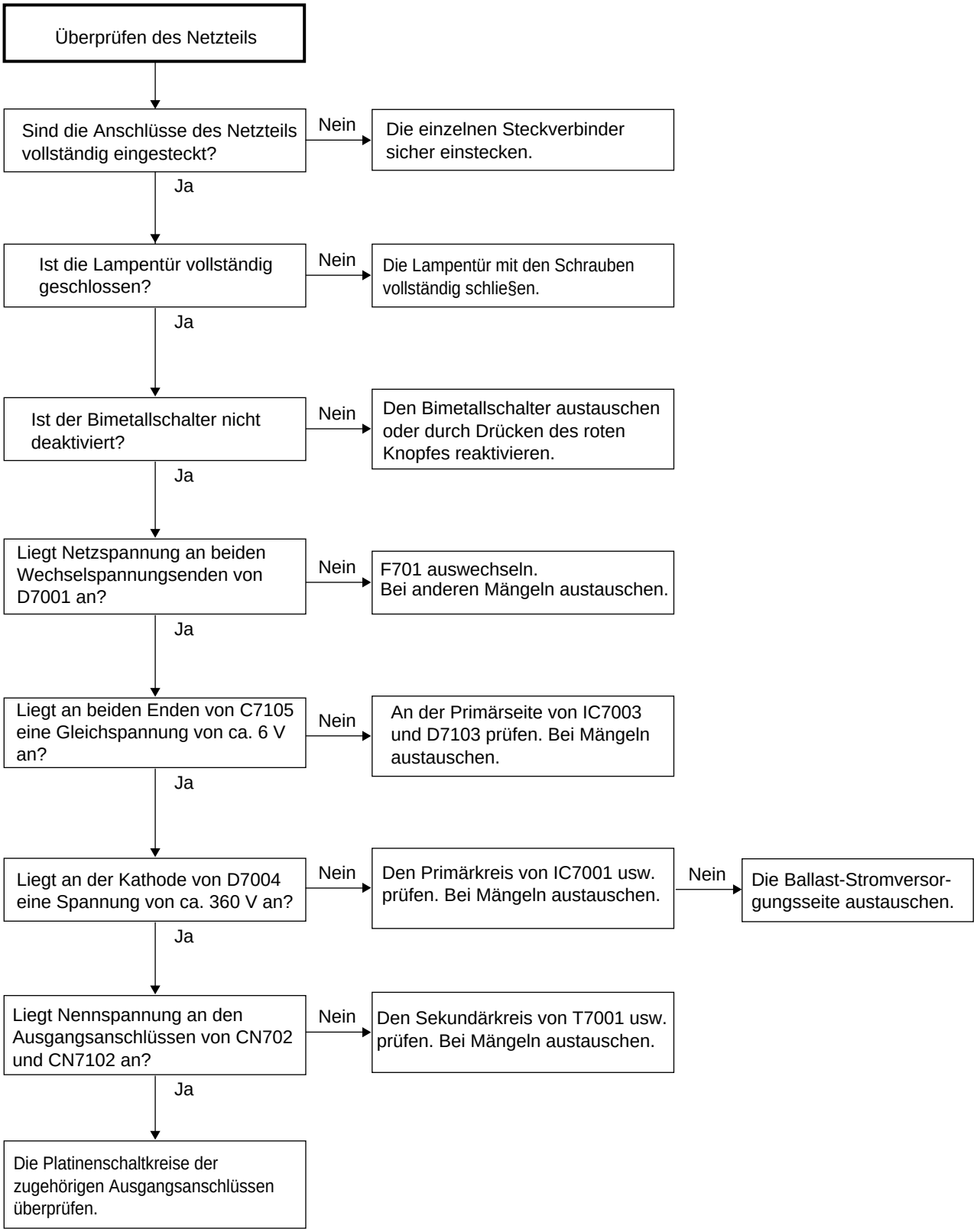
● Einstellmodus-Prozessmenü

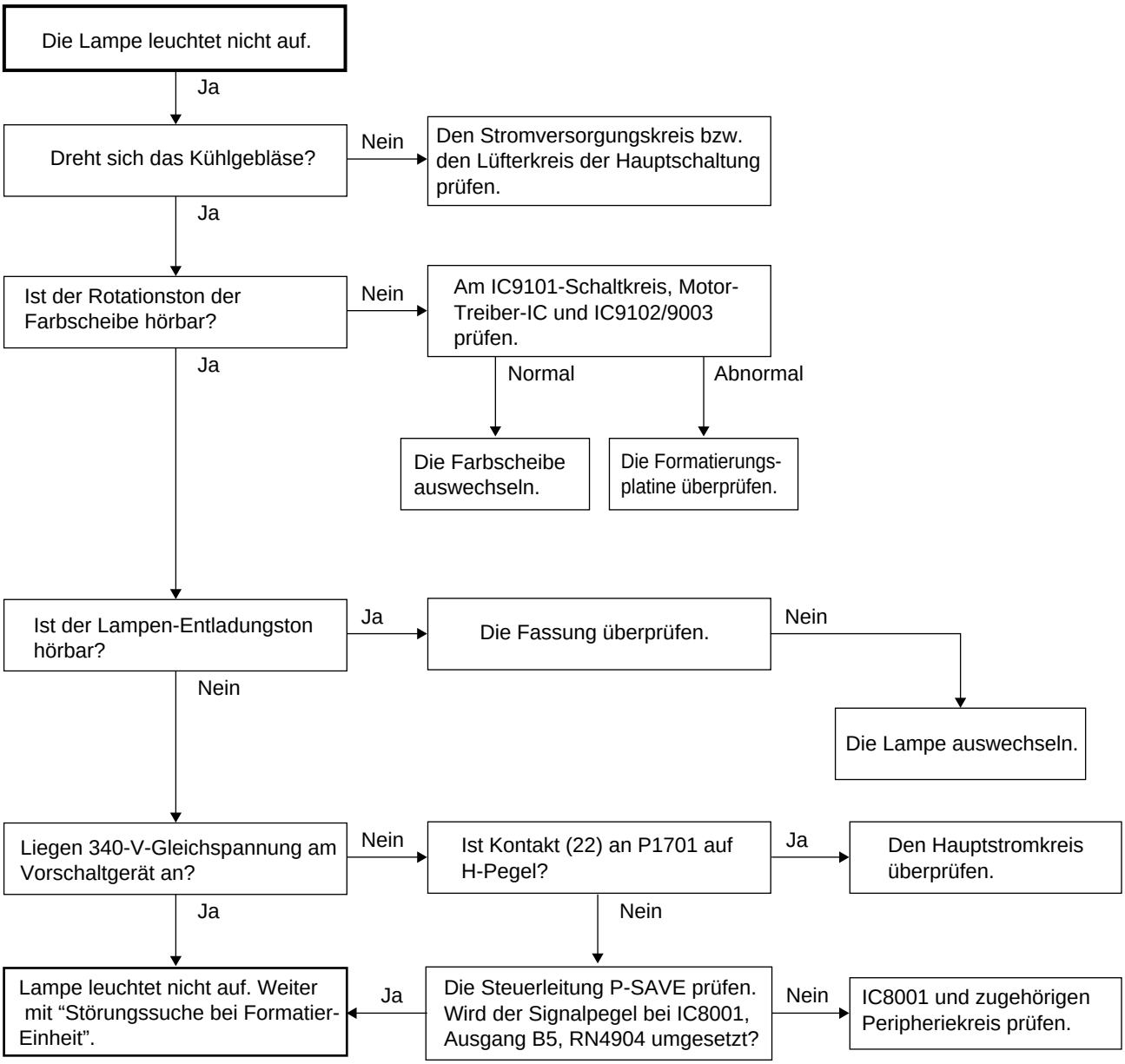
Gruppe	Gegenstand
DTV	Contrast
	Tint
	Color
	Sharpness
	CTI-Level
	LTI-Level
	CB-Offset
	CR-Offset
	Bright
	B-DRIVE
	R-DRIVE
DVD	Contrast
	Tint
	Color
	Sharpness
	CTI-Level
	LTI-Level
	CB-Offset
	CR-Offset
	Bright
	B-DRIVE
	R-DRIVE
VIDEO	Contrast
	N-Tint
	P-Tint
	S-Tint
	N-Color
	P-Color
	S-Color
	Sharpness
	CTI-Level
	LTI-Level
	CB-Offset
	CR-Offset
	Bright
	B-DRIVE
	R-DRIVE

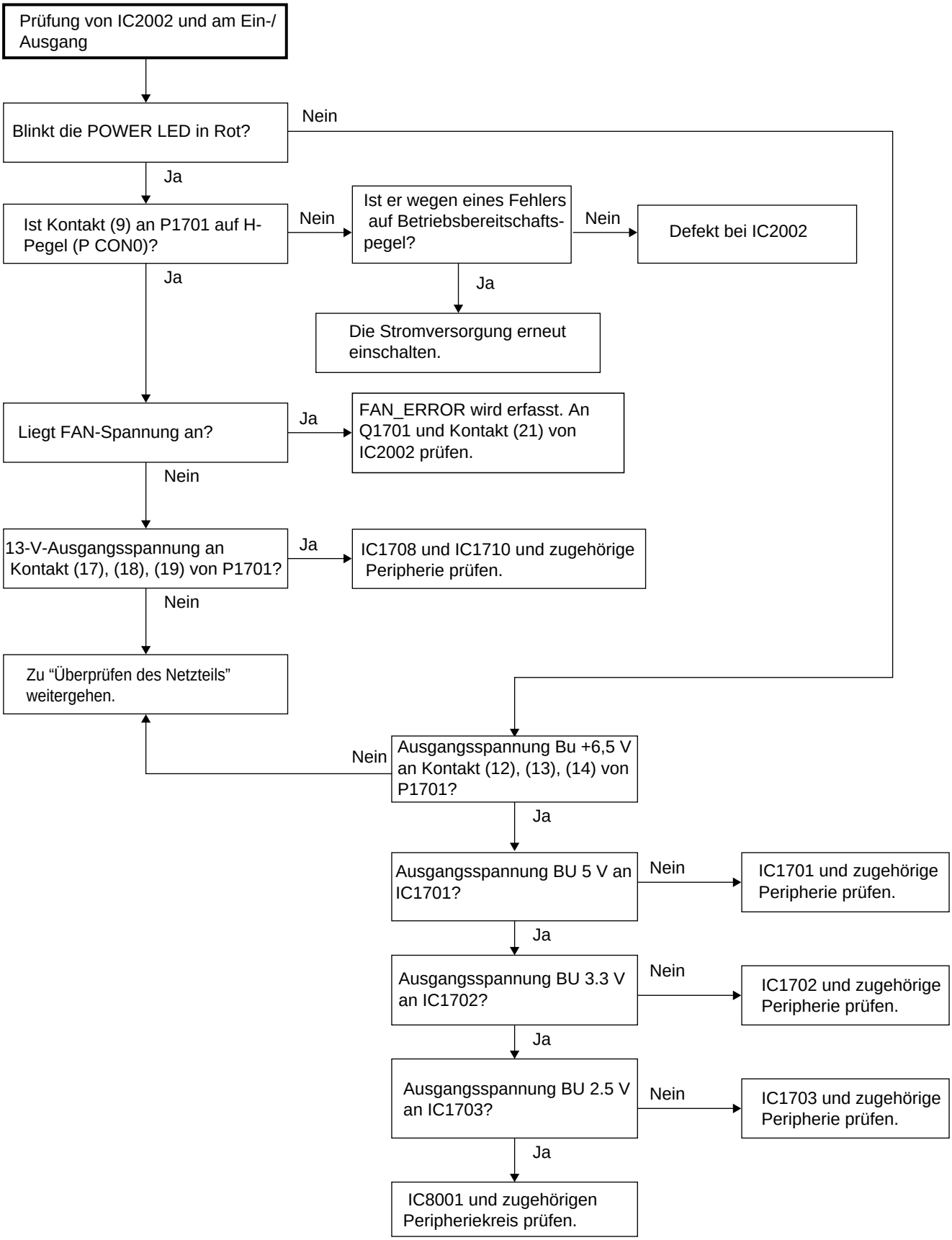
Gruppe	Gegenstand
AD	R-Bright
	R-Contrast
	G-Bright
	G-Contrast
	B-Bright
	B-Contrast
DLP	Index Delay
	R-Bright
	R-Contrast
	G-Bright
	G-Contrast
	B-Bright
	B-Contrast
VIDEO1	N-Contrast
	P-Contrast
	S-Contrast
	Color
	NT3.58 Delay
	NT4.43 Delay
	PAL Delay
	SECAM Delay
VIDEO2	SS-Cont1
	SS-C0nt2
	Color
	SS1 Delay
	SS2 Delay
Pedestal	R-Bright
	R-Contrast
	G-Bright
	G-Contrast
	B-Bright
	B-Contrast

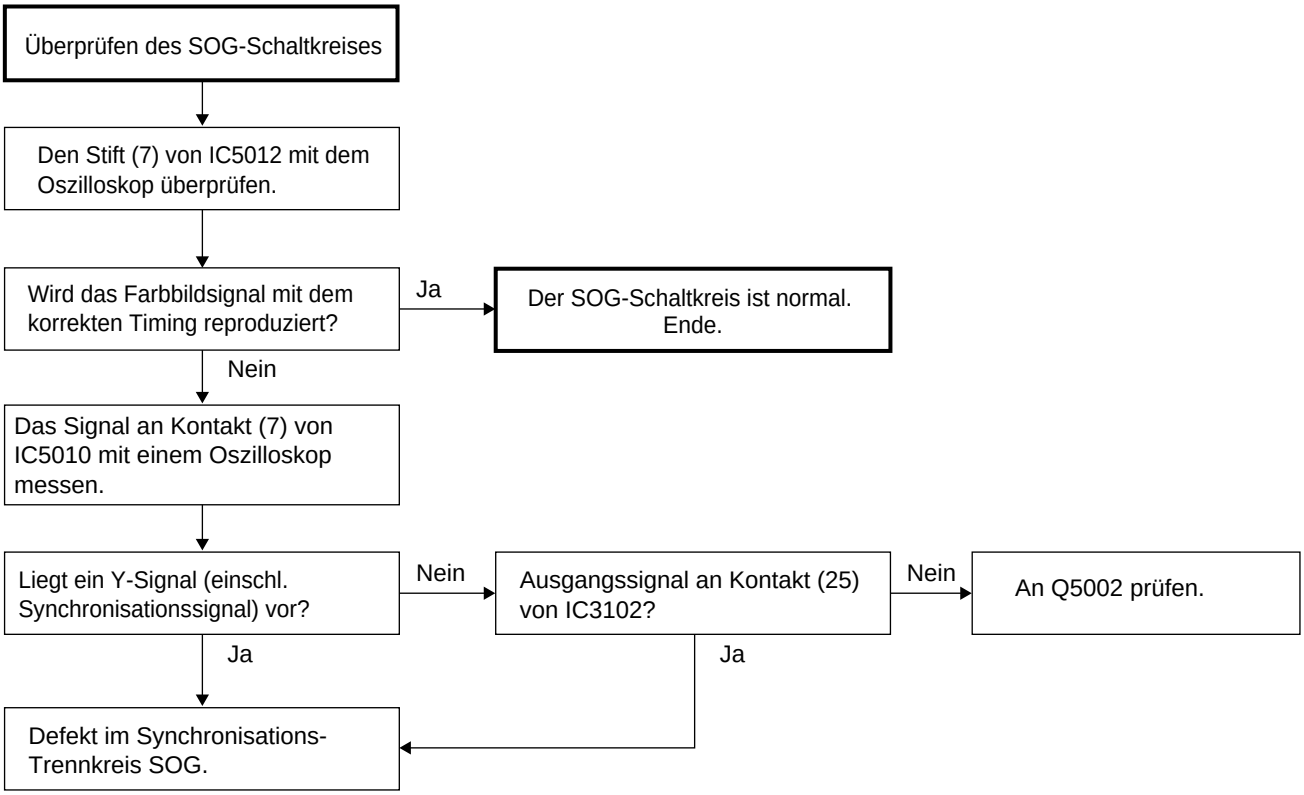
FEHLERSUCHTABELLE

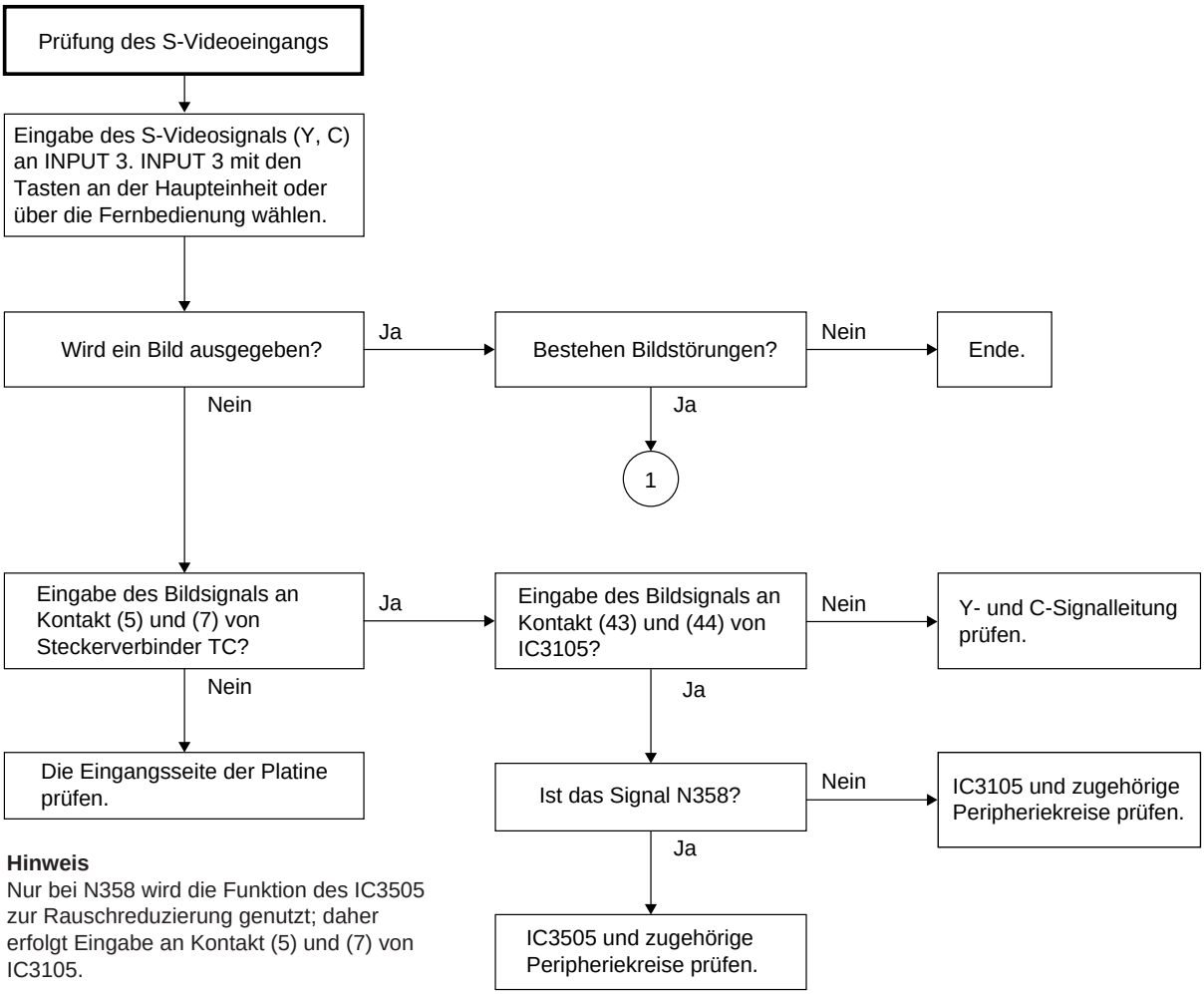

Überprüfen der grundlegenden Funktionen
Leuchtet die POWER LED auf, oder blinkt sie in Rot bzw. Grün?
Nein
Zu "Überprüfen des Netzteils" weitergehen.
Ja
Funktioniert das Gerät durch den Geräteschlüssel oder die Einschalttaste auf der Fernbedienung?
Nein
Die Peripheriekreise von IC8001 und IC2002 prüfen.
Ja
Dreht sich das Kühlgebläse und leuchtet die Lampe?
Nein
Zu "Überprüfen der Lampenfunktion" weitergehen.
Ja
Wird das Benutzermenü angezeigt?
Nein
Den Formatierungsschaltkreis und seine zugehörigen Komponenten prüfen.
Ja
Ist der 15-pol. D-Sub-Eingang normal?
Nein
Prüfung von IC6004(AD) oder IC3104 sowie des analogen RGB-Eingangs.
Ja
Funktioniert der Komponenteneingang normal?
Nein
Liegen Eingangssignale an den Stiften (8), (17) und (23) von IC8013 vor?
Nein
Den IC3104 und seinen peripheren Schaltkreis überprüfen.
Ja
Ist der Videoeingang normal?
Nein
Weiter mit "Prüfung des Videoeingangs". Liegt ein Eingangssignal von IC3105 an?
Nein
Den IC3105 und seinen peripheren Schaltkreis überprüfen.
Ja
Ja
Ende
Den IC3102 und seinen peripheren Schaltkreis überprüfen.


Überprüfen des Netzteils
Sind die Anschlüsse des Netzteils vollständig eingesteckt?
Nein
Die einzelnen Steckverbinder sicher einstecken.
Ja
Ist die Lampentür vollständig geschlossen?
Nein
Die Lampentür mit den Schrauben vollständig schlie§en.
Ja
Ist der Bimetallschalter nicht deaktiviert?
Nein
Den Bimetallschalter austauschen oder durch Drücken des roten Knopfes reaktivieren.
Ja
Liegt Netzspannung an beiden Wechselspannungsenden von D7001 an?
Nein
F701 auswechseln.
Bei anderen Mängeln austauschen.
Ja
Liegt an beiden Enden von C7105 eine Gleichspannung von ca. 6 V an?
Nein
An der Primärseite von IC7003 und D7103 prüfen. Bei Mängeln austauschen.
Ja
Liegt an der Kathode von D7004 eine Spannung von ca. 360 V an?
Nein
Den Primärkreis von IC7001 usw. prüfen. Bei Mängeln austauschen.
Nein
Die Ballast-Stromversor-gungsseite austauschen.
Ja
Liegt Nennspannung an den Ausgangsanschlüssen von CN702 und CN7102 an?
Nein
Den Sekundärkreis von T7001 usw. prüfen. Bei Mängeln austauschen.
Ja
Die Platinenschaltkreise der zugehörigen Ausgangsanschlüssen überprüfen.

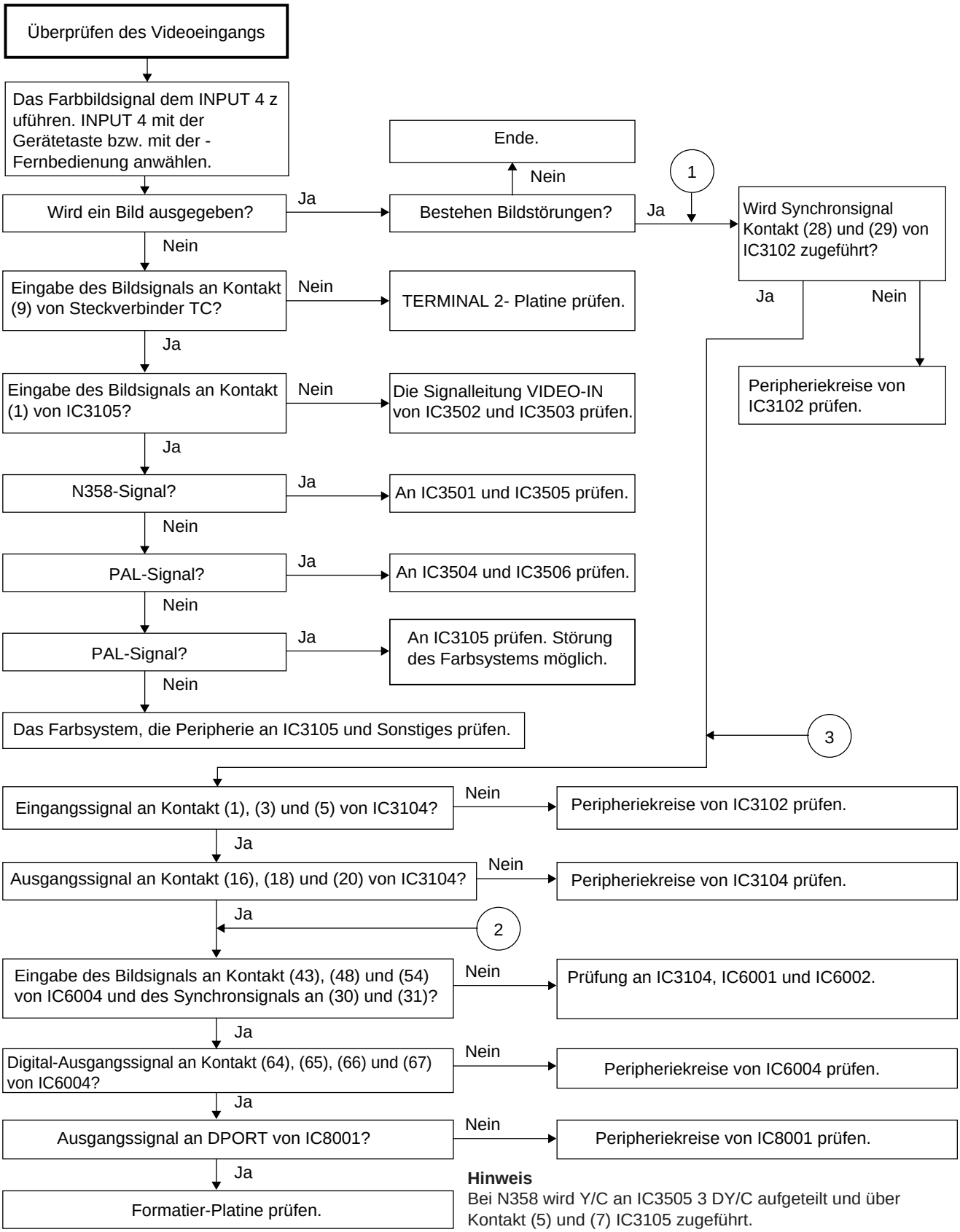

Die Lampe leuchtet nicht auf.
Ja
Dreht sich das Kühlgebläse?
Nein
Den Stromversorgungskreis bzw. den Lüfterkreis der Hauptschaltung prüfen.
Ja
Ist der Rotationston der Farbscheibe hörbar?
Nein
Am IC9101-Schaltkreis, Motor-Treiber-IC und IC9102/9003 prüfen.
Ja
Normal
Abnormal
Die Farbscheibe auswechseln.
Die Formatierungs-platine überprüfen.
Ist der Lampen-Entladungston hörbar?
Ja
Die Fassung überprüfen.
Nein
Die Lampe auswechseln.
Nein
Liegen 340-V-Gleichspannung am Vorschaltgerät an?
Nein
Ist Kontakt (22) an P1701 auf H-Pegel?
Ja
Den Hauptstromkreis überprüfen.
Ja
Nein
Lampe leuchtet nicht auf. Weiter mit “Störungssuche bei Formatier-Einheit”.
Ja
Die Steuerleitung P-SAVE prüfen. Wird der Signalpegel bei IC8001, Ausgang B5, RN4904 umgesetzt?
Nein
IC8001 und zugehörigen Peripheriekreis prüfen.


Prüfung von IC2002 und am Ein-/ Ausgang
Blinkt die POWER LED in Rot?
Nein
Ja
Ist Kontakt (9) an P1701 auf H-Pegel (P CON0)?
Nein
Ist er wegen eines Fehlers auf Betriebsbereitschafts-pegel?
Nein
Defekt bei IC2002
Ja
Ja
Die Stromversorgung erneut einschalten.
Liegt FAN-Spannung an?
Ja
FAN_ERROR wird erfasst. An Q1701 und Kontakt (21) von IC2002 prüfen.
Nein
13-V-Ausgangsspannung an Kontakt (17), (18), (19) von P1701?
Ja
IC1708 und IC1710 und zugehörige Peripherie prüfen.
Nein
Zu “Überprüfen des Netzteils” weitergehen.
Nein
Ausgangsspannung Bu +6,5 V an Kontakt (12), (13), (14) von P1701?
Ja
Ausgangsspannung BU 5 V an IC1701?
Nein
IC1701 und zugehörige Peripherie prüfen.
Ja
Ausgangsspannung BU 3.3 V an IC1702?
Nein
IC1702 und zugehörige Peripherie prüfen.
Ja
Ausgangsspannung BU 2.5 V an IC1703?
Nein
IC1703 und zugehörige Peripherie prüfen.
Ja
IC8001 und zugehörigen Peripheriekreis prüfen.


Überprüfen des SOG-Schaltkreises
Den Stift (7) von IC5012 mit dem Oszilloskop überprüfen.
Wird das Farbbildsignal mit dem korrekten Timing reproduziert?
Ja
Der SOG-Schaltkreis ist normal. Ende.
Nein
Das Signal an Kontakt (7) von IC5010 mit einem Oszilloskop messen.
Liegt ein Y-Signal (einschl. Synchronisationssignal) vor?
Nein
Ausgangssignal an Kontakt (25) von IC3102?
Nein
An Q5002 prüfen.
Ja
Ja
Defekt im Synchronisations-Trennkreis SOG.

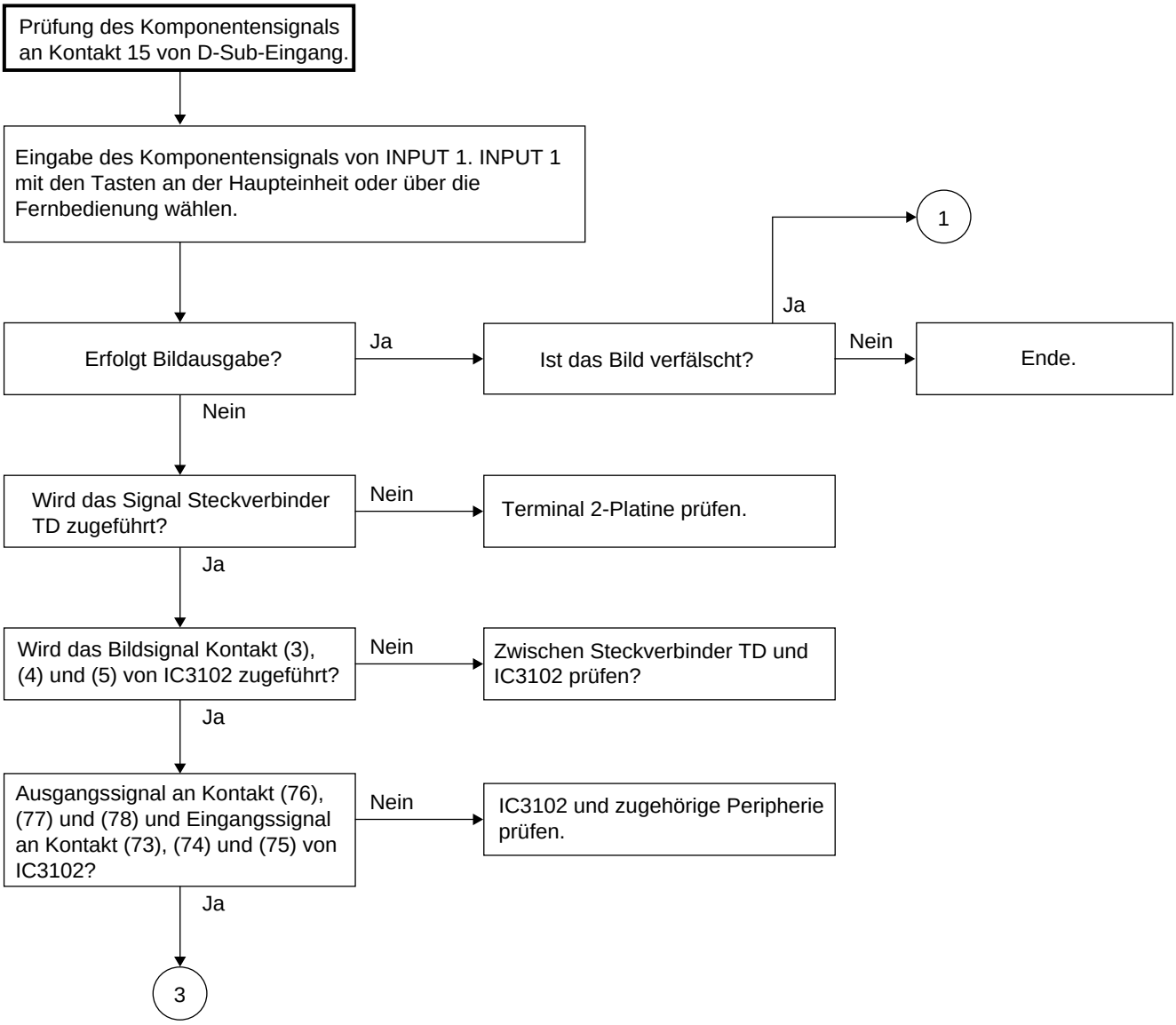


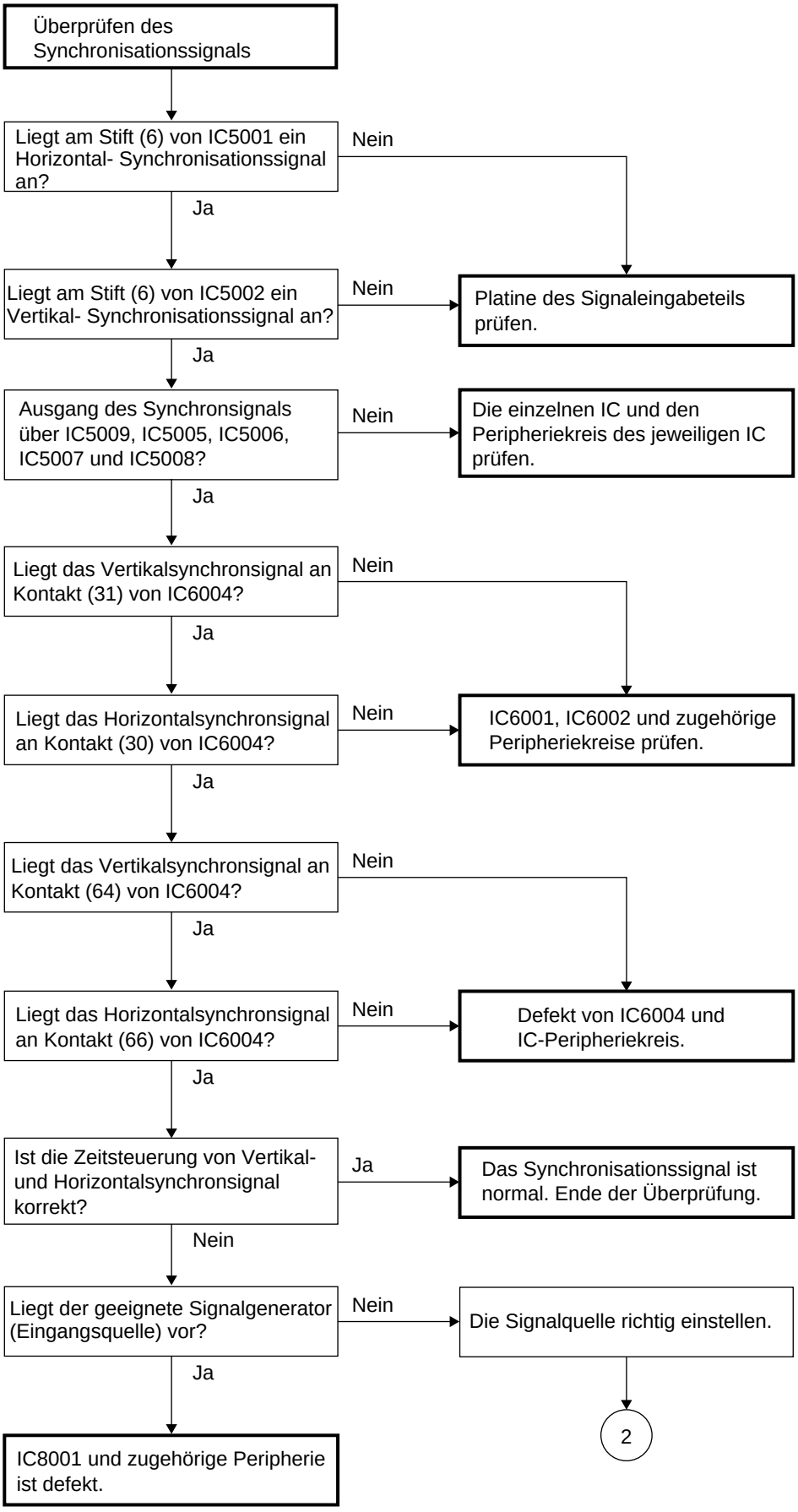
Hinweis
Nur bei N358 wird die Funktion des IC3505 zur Rauschreduzierung genutzt; daher erfolgt Eingabe an Kontakt (5) und (7) von IC3105.



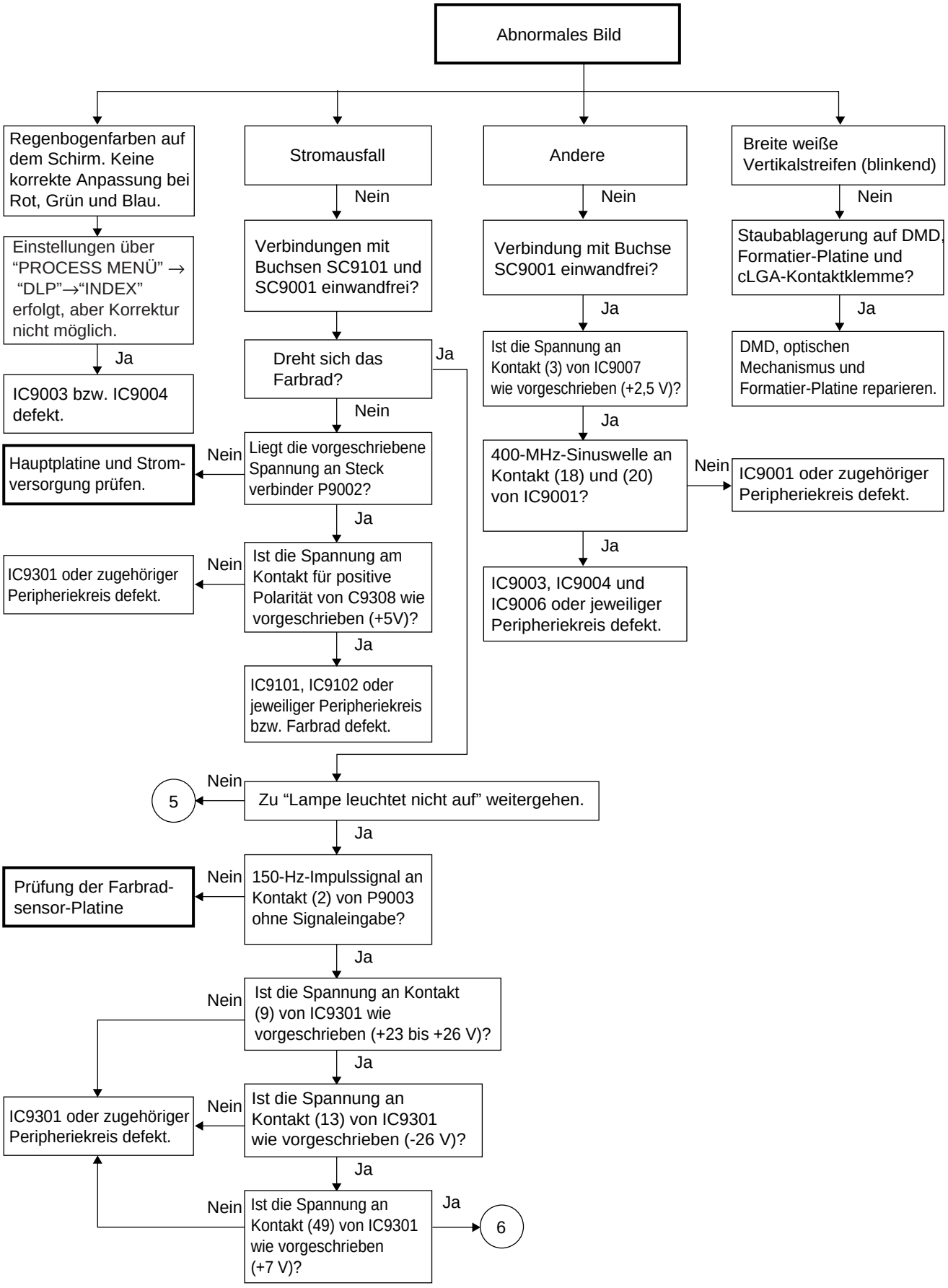
Hinweis

Bei N358 wird Y/C an IC3505 3 DY/C aufgeteilt und über Kontakt (5) und (7) IC3105 zugeführt.
Beim PAL-System wird Y/C an IC3506 3 Line COM aufgeteilt und über Kontakt (39) und (41) IC3105 zugeführt.
Die Videoausgabe erfolgt über Kontakt (21), (22) und (23) bei Farbdifferenz von IC3105.

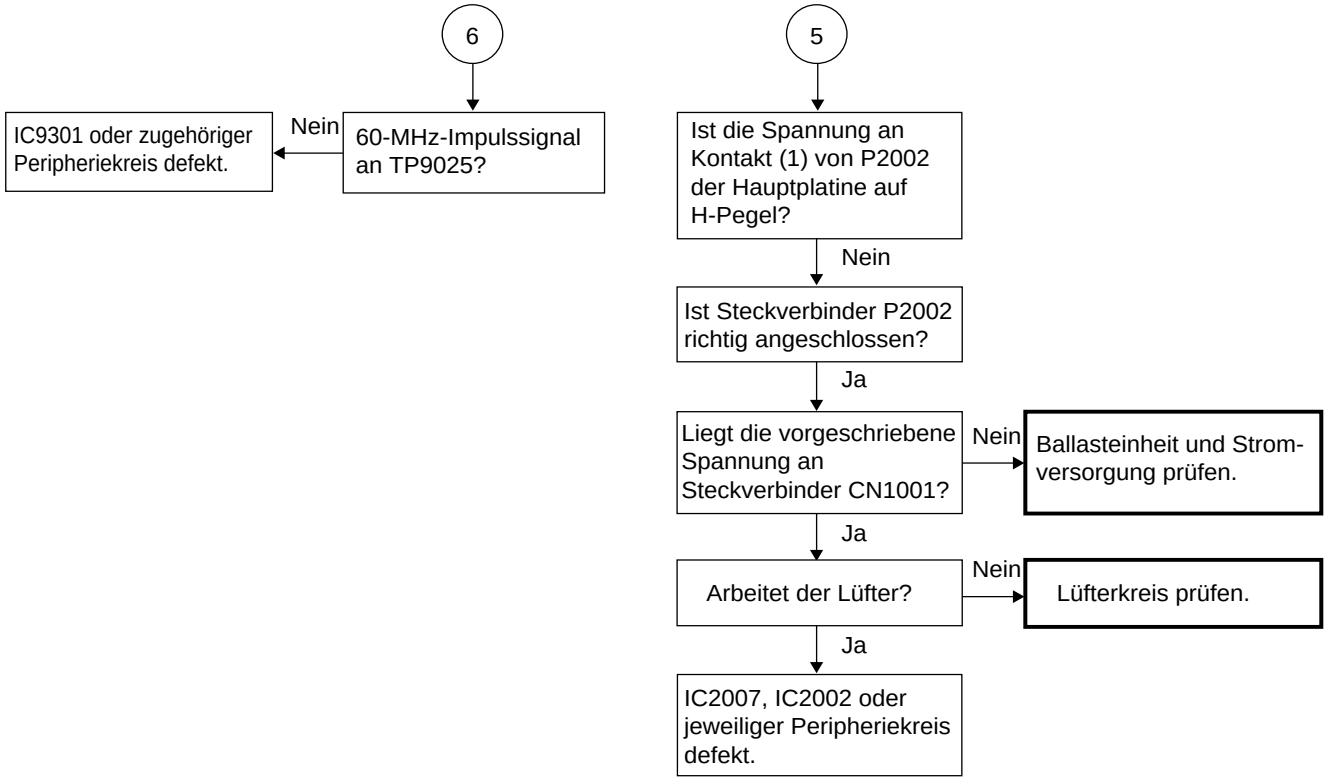

Prüfung des Komponentensignals an Kontakt 15 von D-Sub-Eingang.
Eingabe des Komponentensignals von INPUT 1. INPUT 1 mit den Tasten an der Haupteinheit oder über die Fernbedienung wählen.
Erfolgt Bildausgabe?
Ja
Ist das Bild verfälscht?
Ja
1
Nein
Ende.
Nein
Wird das Signal Steckverbinder TD zugeführt?
Nein
Terminal 2-Platine prüfen.
Ja
Wird das Bildsignal Kontakt (3), (4) und (5) von IC3102 zugeführt?
Nein
Zwischen Steckverbinder TD und IC3102 prüfen?
Ja
Ausgangssignal an Kontakt (76), (77) und (78) und Eingangssignal an Kontakt (73), (74) und (75) von IC3102?
Nein
IC3102 und zugehörige Peripherie prüfen.
Ja
3


Überprüfen des Synchronisationssignals
Liegt am Stift (6) von IC5001 ein Horizontal- Synchronisationssignal an?
Nein
Ja
Liegt am Stift (6) von IC5002 ein Vertikal- Synchronisationssignal an?
Nein
Platine des Signaleingabeteils prüfen.
Ja
Ausgang des Synchronsignals über IC5009, IC5005, IC5006, IC5007 und IC5008?
Nein
Die einzelnen IC und den Peripheriekreis des jeweiligen IC prüfen.
Ja
Liegt das Vertikalsynchronsignal an Kontakt (31) von IC6004?
Nein
Ja
Liegt das Horizontalsynchronsignal an Kontakt (30) von IC6004?
Nein
IC6001, IC6002 und zugehörige Peripheriekreise prüfen.
Ja
Liegt das Vertikalsynchronsignal an Kontakt (64) von IC6004?
Nein
Ja
Liegt das Horizontalsynchronsignal an Kontakt (66) von IC6004?
Nein
Defekt von IC6004 und IC-Peripheriekreis.
Ja
Ist die Zeitsteuerung von Vertikal- und Horizontalsynchronsignal korrekt?
Ja
Das Synchronisationssignal ist normal. Ende der Überprüfung.
Nein
Liegt der geeignete Signalgenerator (Eingangsquelle) vor?
Nein
Die Signalquelle richtig einstellen.
Ja
2
IC8001 und zugehörige Peripherie ist defekt.

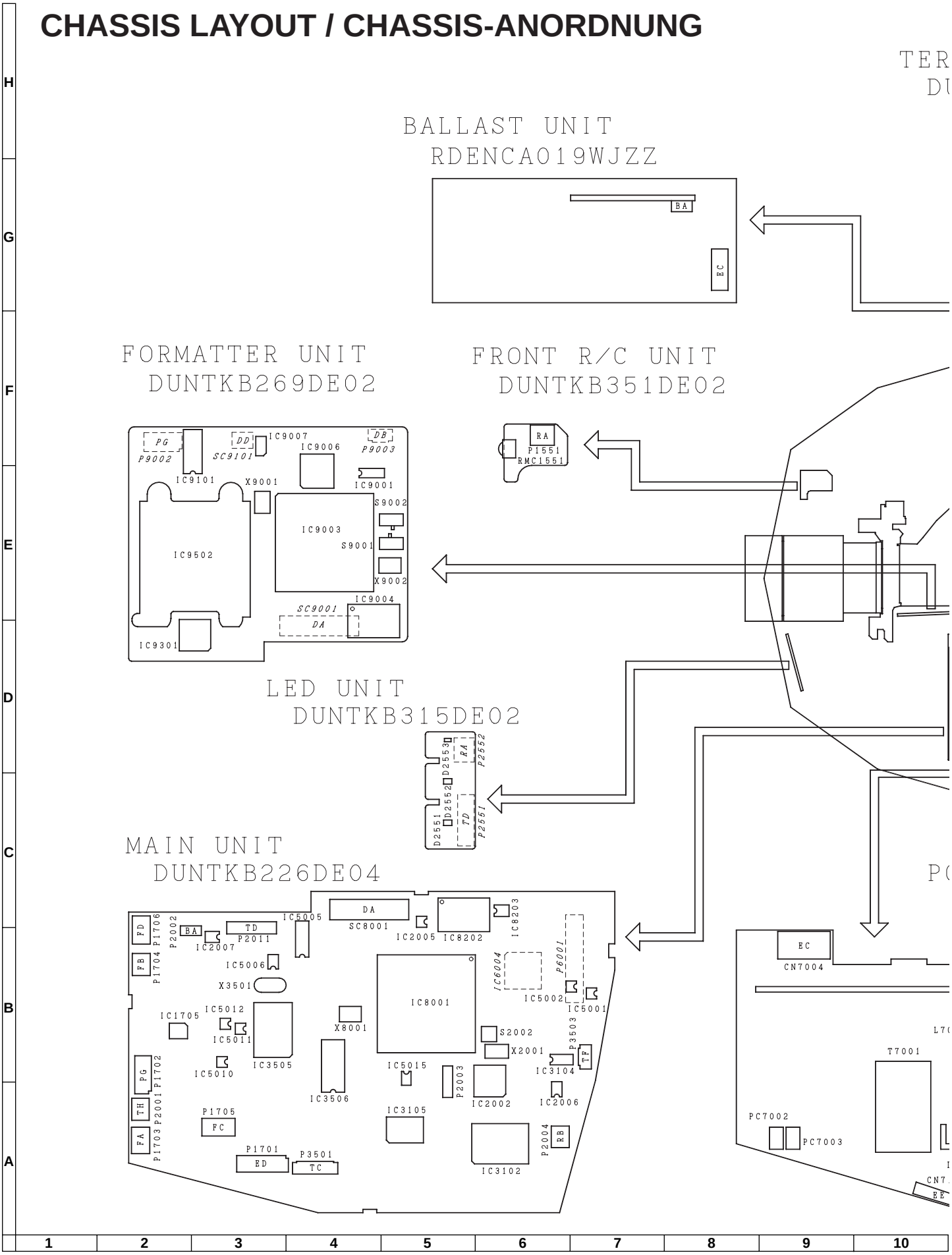
- Störungssuche bei der Formatiereinheit -1/2

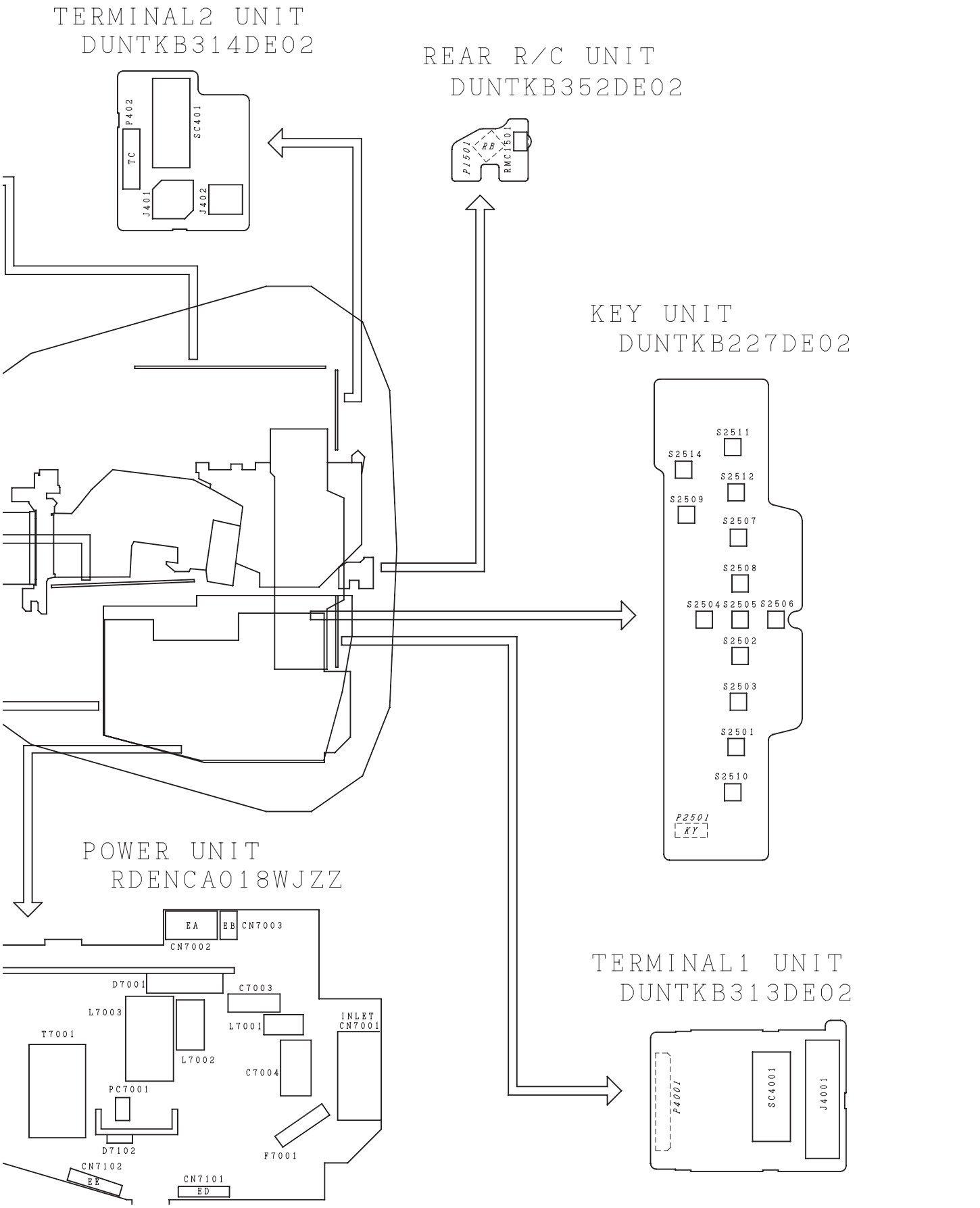

Abnormales Bild
Regenbogenfarben auf dem Schirm. Keine korrekte Anpassung bei Rot, Grün und Blau.
Einstellungen über "PROCESS MENÜ" → "DLP"→"INDEX" erfolgt, aber Korrektur nicht möglich.
Ja
IC9003 bzw. IC9004 defekt.
Hauptplatine und Stromversorgung prüfen.
Stromausfall
Nein
Verbindungen mit Buchsen SC9101 und SC9001 einwandfrei?
Dreht sich das Farbrad?
Ja
Nein
Liegt die vorgeschriebene Spannung an Steck verbinder P9002?
Nein
Ja
Ist die Spannung am Kontakt für positive Polarität von C9308 wie vorgeschrieben (+5V)?
Nein
IC9301 oder zugehöriger Peripheriekreis defekt.
Ja
IC9101, IC9102 oder jeweiliger Peripheriekreis bzw. Farbrad defekt.
Andere
Nein
Verbindung mit Buchse SC9001 einwandfrei?
Ja
Ist die Spannung an Kontakt (3) von IC9007 wie vorgeschrieben (+2,5 V)?
Ja
400-MHz-Sinuswelle an Kontakt (18) und (20) von IC9001?
Nein
IC9001 oder zugehöriger Peripheriekreis defekt.
Ja
IC9003, IC9004 und IC9006 oder jeweiliger Peripheriekreis defekt.
Breite weiße Vertikalstreifen (blinkend)
Nein
Staubablagerung auf DMD, Formatier-Platine und cLGA-Kontaktklemme?
Ja
DMD, optischen Mechanismus und Formatier-Platine reparieren.
5
Nein
Zu "Lampe leuchtet nicht auf" weitergehen.
Ja
Prüfung der Farbrad-sensor-Platine
Nein
150-Hz-Impulssignal an Kontakt (2) von P9003 ohne Signaleingabe?
Ja
Nein
Ist die Spannung an Kontakt (9) von IC9301 wie vorgeschrieben (+23 bis +26 V)?
Ja
IC9301 oder zugehöriger Peripheriekreis defekt.
Nein
Ist die Spannung an Kontakt (13) von IC9301 wie vorgeschrieben (-26 V)?
Ja
Nein
Ist die Spannung an Kontakt (49) von IC9301 wie vorgeschrieben (+7 V)?
Ja
6

- Störungssuche bei der Formatiereinheit-2/2



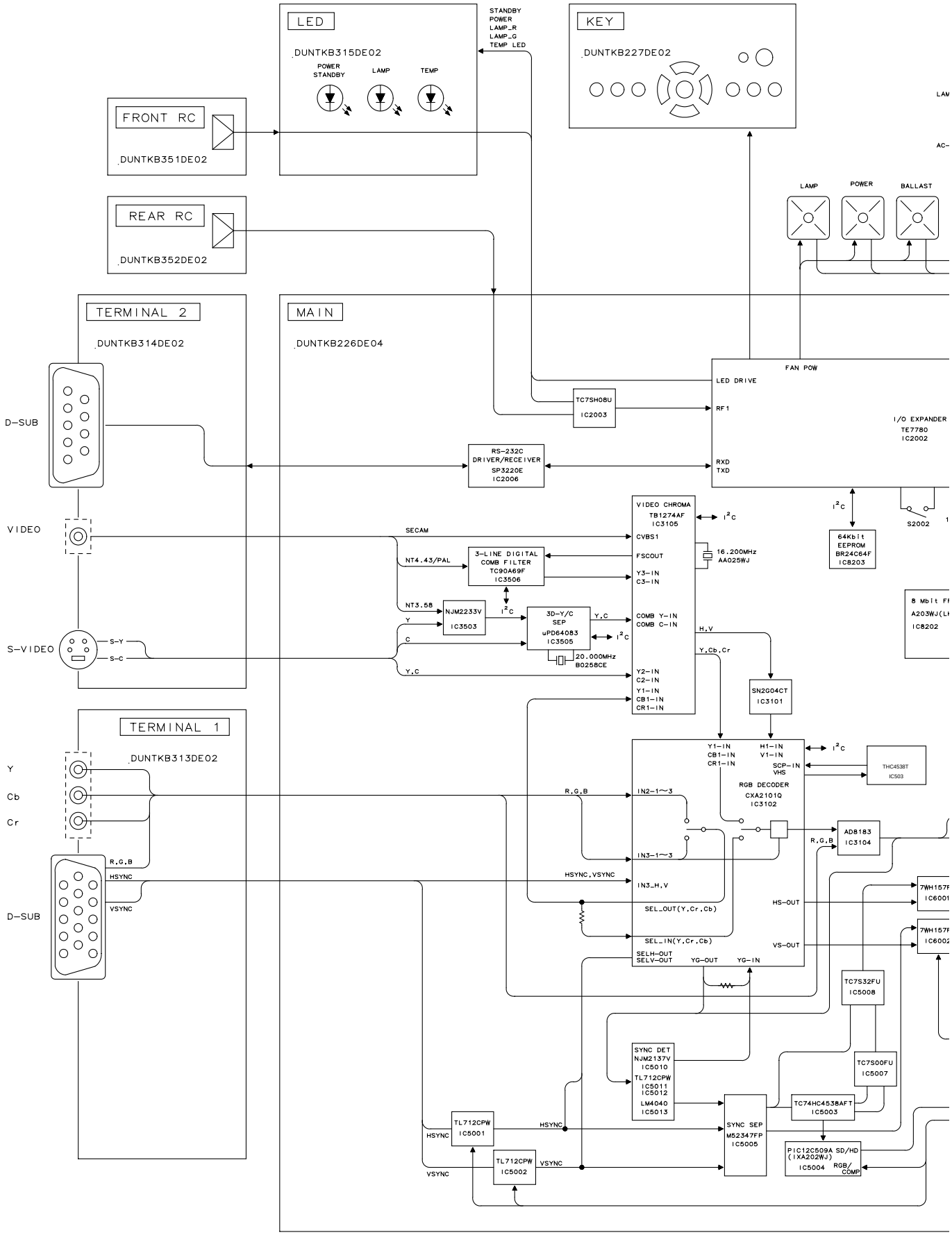
CHASSIS LAYOUT / CHASSIS-ANORDNUNG

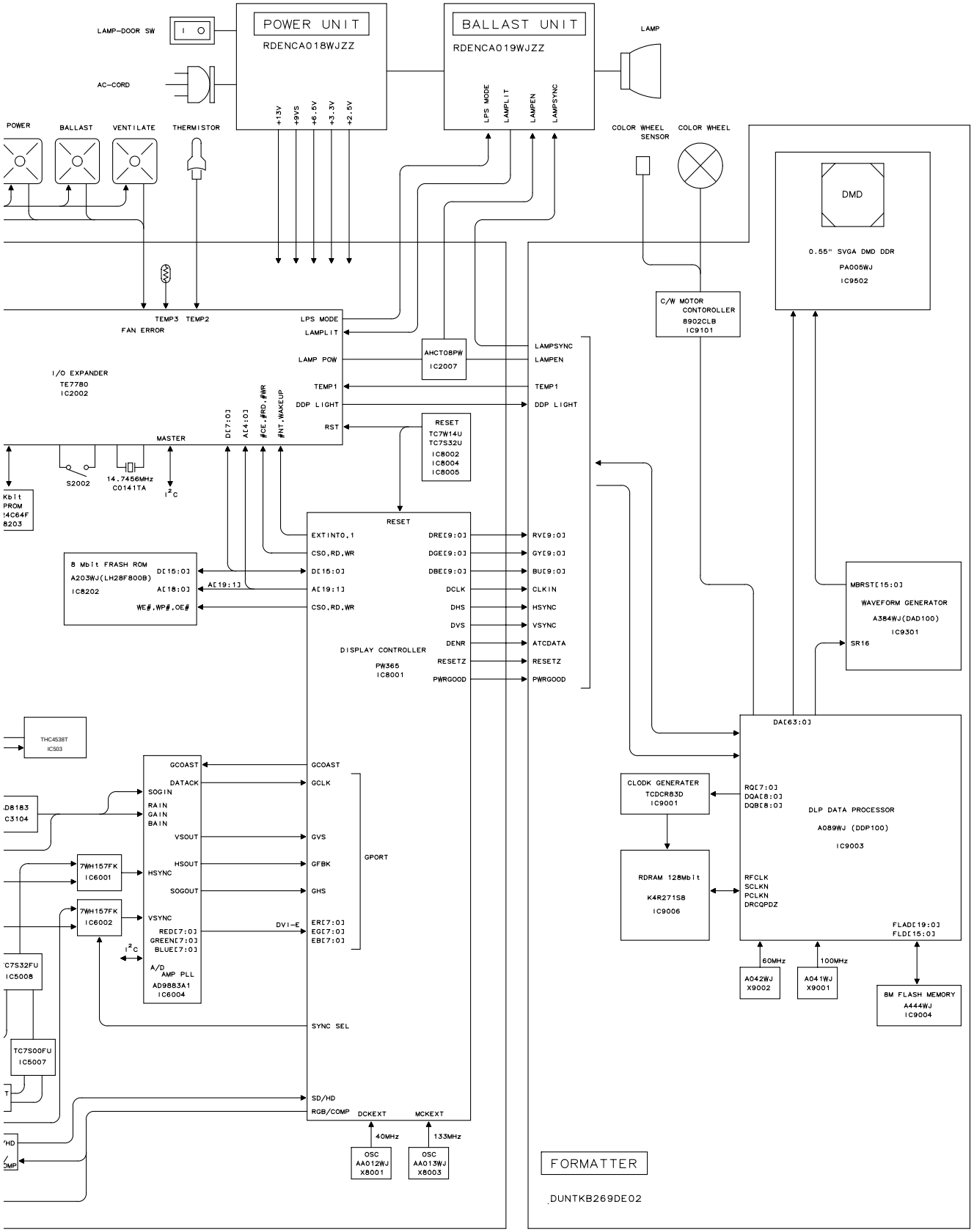




10	11	12	13	14	15	16	17	18	19

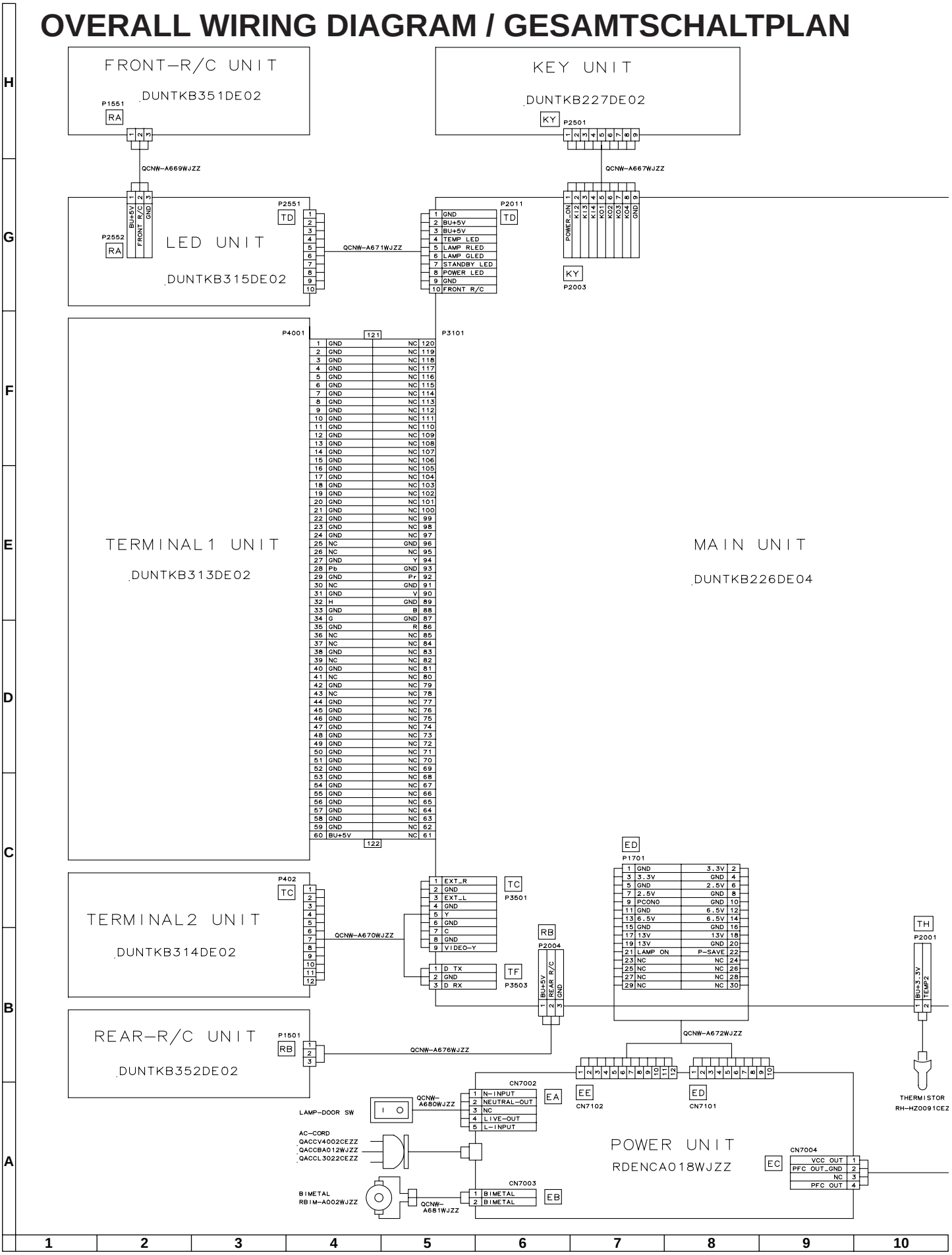
BLOCK DIAGRAM / BLOCKSCHALTBILD

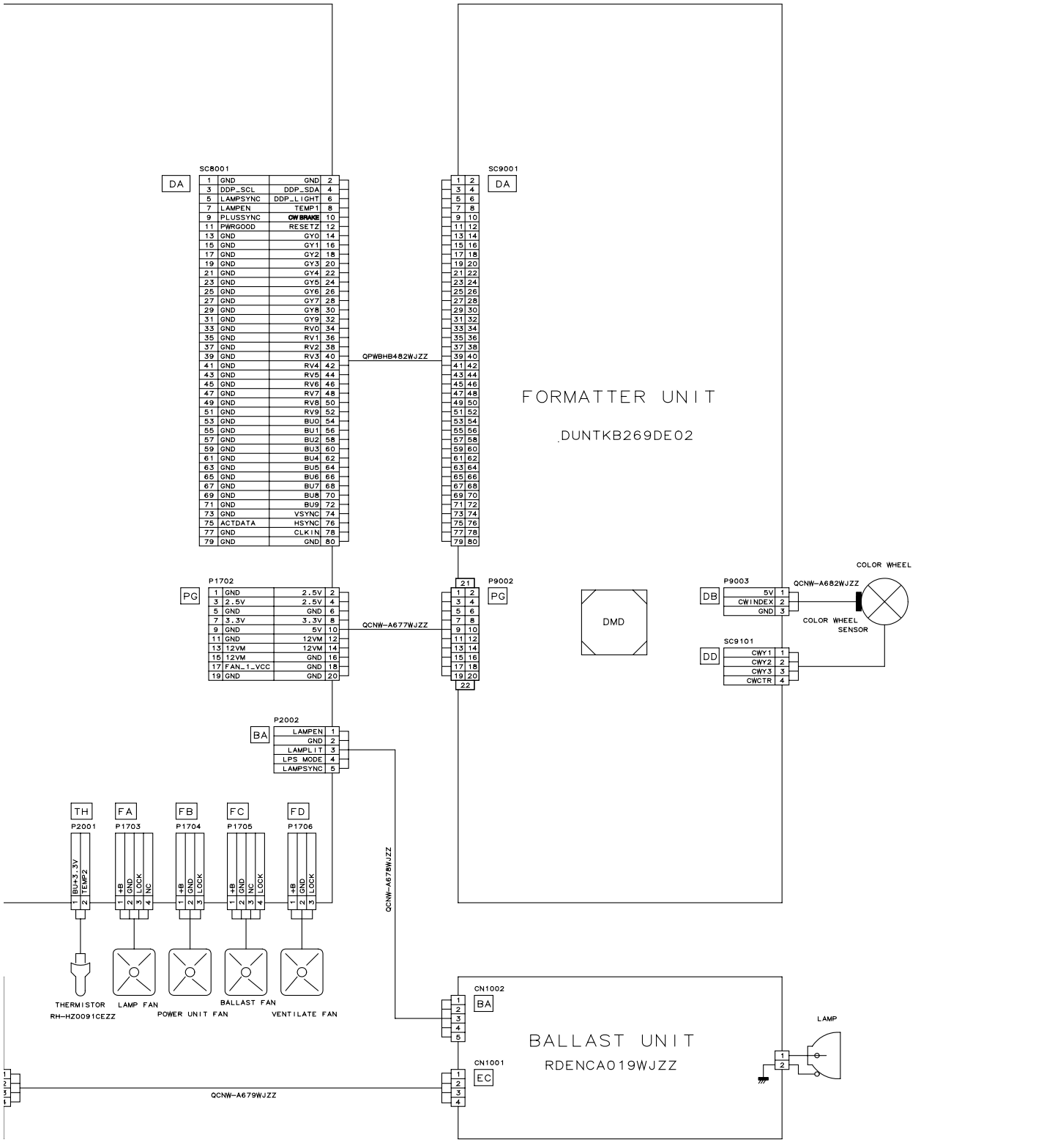




10	11	12	13	14	15	16	17	18	19

OVERALL WIRING DIAGRAM / GESAMTSCHALTPLAN





10	11	12	13	14	15	16	17	18	19

DESCRIPTION OF SCHEMATIC DIAGRAM

VOLTAGE MEASUREMENT CONDITION:

1. Voltages at test points are measured at the supply voltage of AC 220V. Signals are fed by a color bar signal generator for servicing purpose and the above voltages are measured with a 20k ohm/V tester.

WAVEFORM MEASUREMENT CONDITION:

1. Waveforms at test points are observed at the supply voltage of AC 220V. Signals are fed by a color bar signal generator for servicing purpose.

INDICATION OF RESISTOR & CAPACITOR:

RESISTOR

1. The unit of resistance "Ω" is omitted. (K=kΩ=1000 Ω, M=MΩ).
2. All resistors are ± 5%, unless otherwise noted. (J= ± 5%, F= ± 1%, D= ± 0.5%)
3. All resistors are 1/10W, unless otherwise noted.
4. All resistors are Carbon type, unless otherwise noted.
   Ⓒ: Solid Ⓦ: Cement
   Ⓢ: Oxide Film Ⓣ: Special
   Ⓝ: Metal Coating

CAPACITOR

1. All capacitors are µF, unless otherwise noted. (P=pF=µµF).
2. All capacitors are 50V, unless otherwise noted.
3. All capacitors are Ceramic type, unless otherwise noted.
   (ML): Mylar (TA): Tantalum
   (PF): Polypro Film (ST): Styrol

CAUTION:
This circuit diagram is original one, therefore there may be a slight difference from yours.

SAFETY NOTES:

1. ***DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACEING PARTS.***
2. ***SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.***

IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH "⚠" ( ) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

BESCHREIBUNG DES SCHEMATISCHEN SCHALTPLANS

SPANNUNGSMESSUNGEN:

1. Spannungen an den Prüfpunkten werden bei einer Netzspannung von 220V gemessen, Signale werden für die Wartung mit einem Farbbalken-Signal generator zugeführt, und Spannungen werden mit einem Meßinstrument (20 k /V) ermittelt.

SIGNALFORMMESSUNGEN:

1. Die Wellenformen an den Testpunkten werden bei einer Netzspannung von 220V verfolgt. Signale werden für die Wartung mit einem Farbbalken-Signal generator zugeführt.

BEZEICHNUNG DES WIDERSTANDS UND KONDENSATORS:

WIDERSTAND

1. Die Widerstandseinheit " " wird weggelassen. (K=k =1000 , M=M)
2. Alle Widerstände haben ± 5%, sofern nicht anders angegeben.(J= ± 5%, F= ± 1%, D= ± 0.5%)
3. Alle Widerstände haben 1/10W, sofern nicht anders angegeben.
4. Alle Widerstände sind Kohletyp, sofern nicht anders angegeben.
   Ⓒ: Solid Ⓦ: Cement
   Ⓢ: Oxide Film Ⓣ: Special
   Ⓝ: Metal Coating

KONDENSATOR

1. Die Kapazitätseinheit ist µF, sofern nicht anders angegeben. (P=pF=µµF).
2. Alle Kondensatoren haben 50V, sofern nicht anders angegeben.
3. Alle Kondensatoren sind Keramiktyp, sofern nicht anders angegeben.
   (ML): Mylar (TA): Tantal
   (PF): Polyprofilm (ST): Styrol

ACHTUNG:
Bei diesem Schaltplan handelt es sich um den ursprünglichen. Esönnen daher geringfügige Unterschiede zu dem Ihrem bestehen.

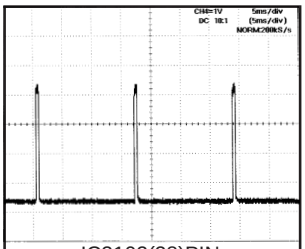
SICHERHEITSANMERKUNGEN:

1. ***VOR DEM AUSWECHSELN VON TEILEN MUSS UNBEDINGT NETZSTECKER AUS DER NETZSTECKDOSE GEZOGEN WERDEN.***
2. ***DIE WARMEABLEITER DER HALBLEITER SOLLTEN BEIM BETRIEB DES CHASSIS ALS MÖGLICHE URSACHEN VON GEFÄHRLICHEN ELEKTRISCHEN SCHLÄGEN BETRACHTET WERDEN.***

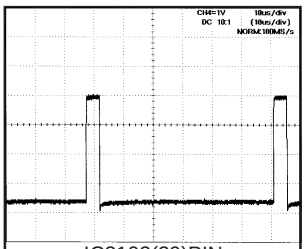
WICHTIGE SICHERHEITSANMERKUNGEN:

MIT "⚠" ( )BEZEICHNETEN TEILE SIND BESONDERS WICHTIG FÜR DIE AUFRECHTERHALTUNG DER SICHERHEIT . BEIM WECHDIESER TEILE SOLLTEN DIE VORGESCHRIEBENEN TEILE IMMER VERWENDET WERDEN, UM SOWOHL DIE SICHERHEIT ALS AUCH DIE LEISTUNG DES GERÄTES AUFRECHTZUERHALTEN.

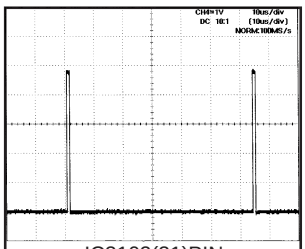
WAVEFORMS / WELLENFORMEN



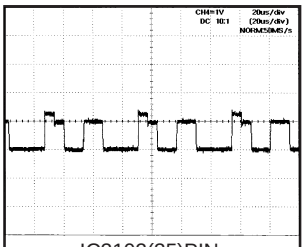
IC3102(28)PIN
(VS-OUT)
H : 5ms/div
V : 1V/div



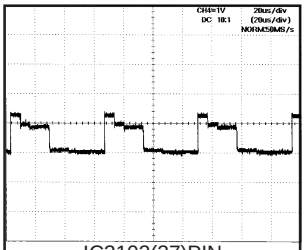
IC3102(29)PIN
(HS-OUT)
H : 10 s/div
V : 1V/div



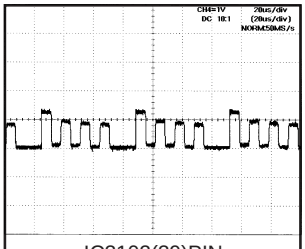
IC3102(31)PIN
(SCP-IN)
H : 10 s/div
V : 1V/div



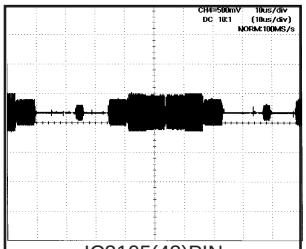
IC3102(35)PIN
(R-OUT)
H : 20 s/div
V : 1V/div



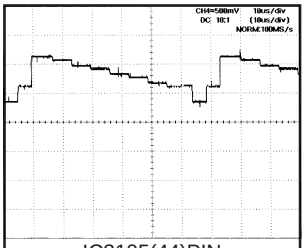
IC3102(37)PIN
(G-OUT)
H : 20 s/div
V : 1V/div



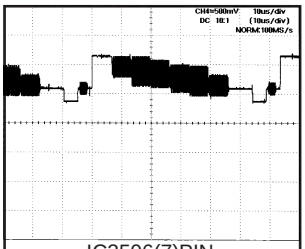
IC3102(39)PIN
(B-OUT)
H : 20 s/div
V : 1V/div



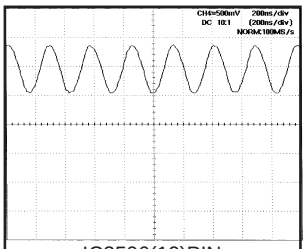
IC3105(43)PIN
(C2-IN)
H : 10 s/div
V : 500mV/div



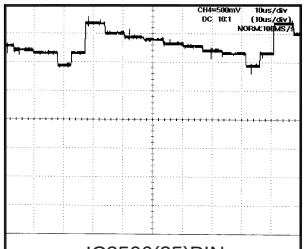
IC3105(44)PIN
(CVBS2/Y2-IN)
H : 10 s/div
V : 500mV/div



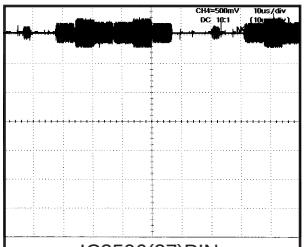
IC3506(7)PIN
(YCIN)
H : 10 s/div
V : 500mV/div



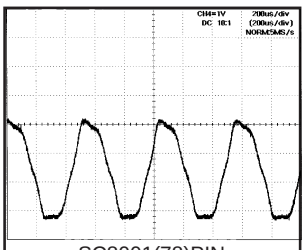
IC3506(19)PIN
(FSC)
H : 200ns/div
V : 500mV/div



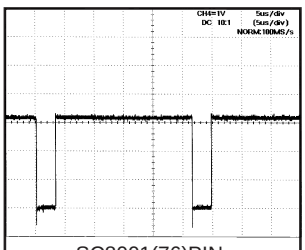
IC3506(25)PIN
(Y-OUT)
H : 10 s/div
V : 500mV/div



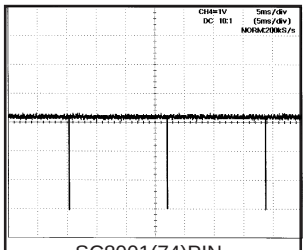
IC3506(27)PIN
(C-OUT)
H : 10 s/div
V : 500mV/div



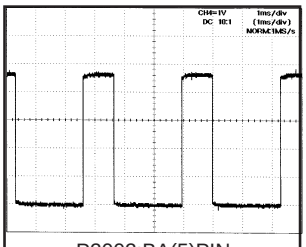
SC8001(78)PIN
(DCLK)
H : 200 s/div
V : 1V/div



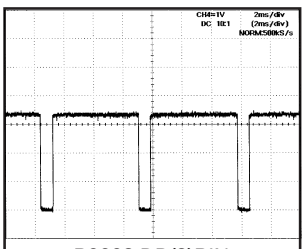
SC8001(76)PIN
(DHS)
H : 5 s/div
V : 1V/div



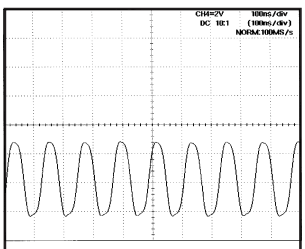
SC8001(74)PIN
(DVS)
H : 5ms/div
V : 1V/div



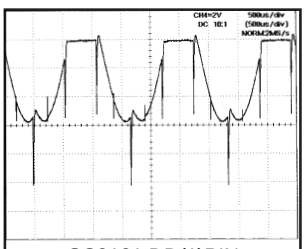
P2002:BA(5)PIN
(LAMPSYNC)
H : 1ms/div
V : 1V/div



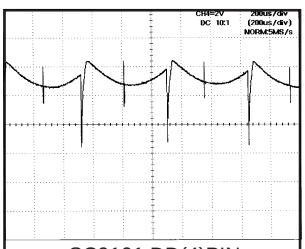
P9003:DB(2)PIN
(CWINDEX)
H : 2ms/div
V : 1V/div



IC9101(16)PIN
(OSC)
H : 100ns/div
V : 2V/div

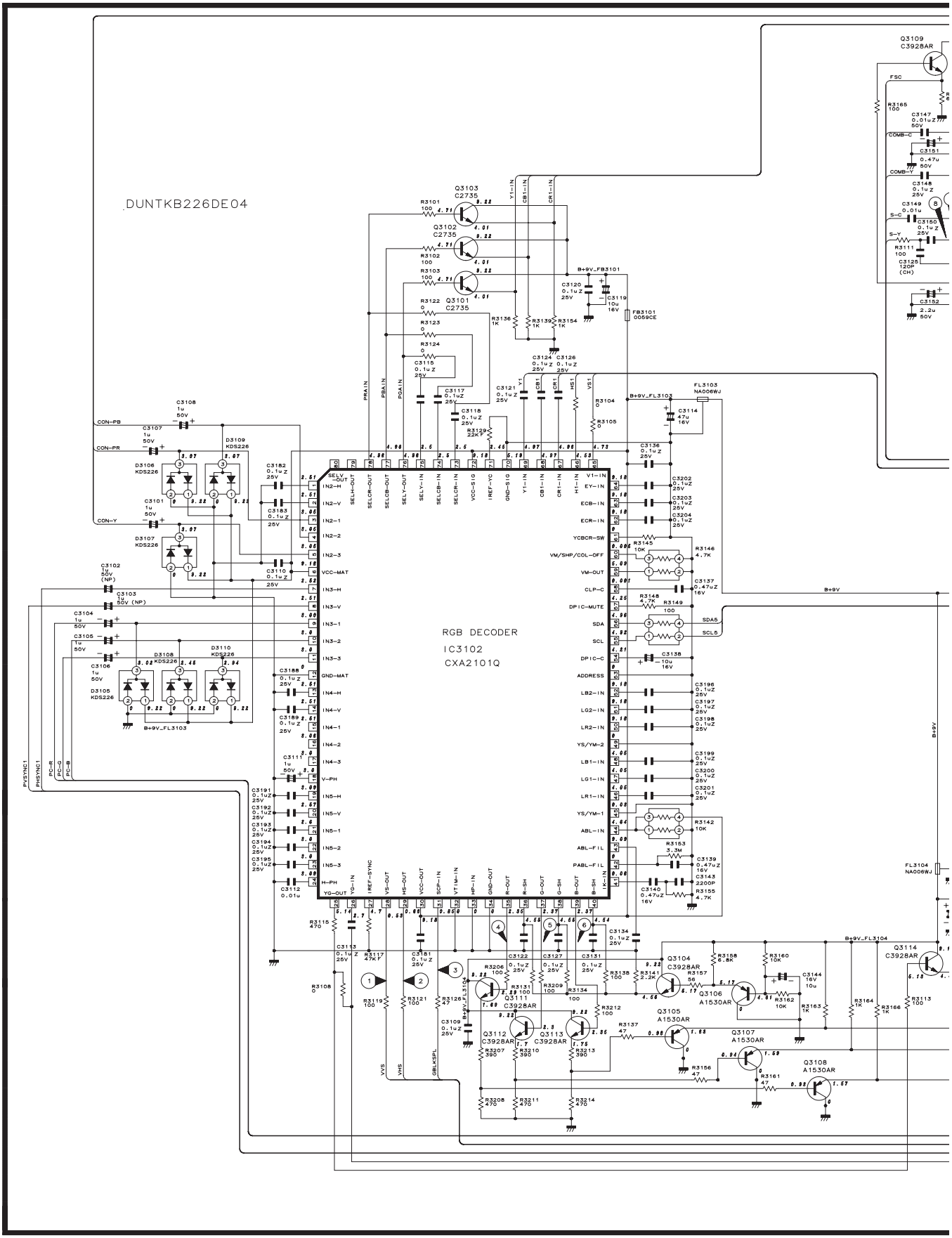


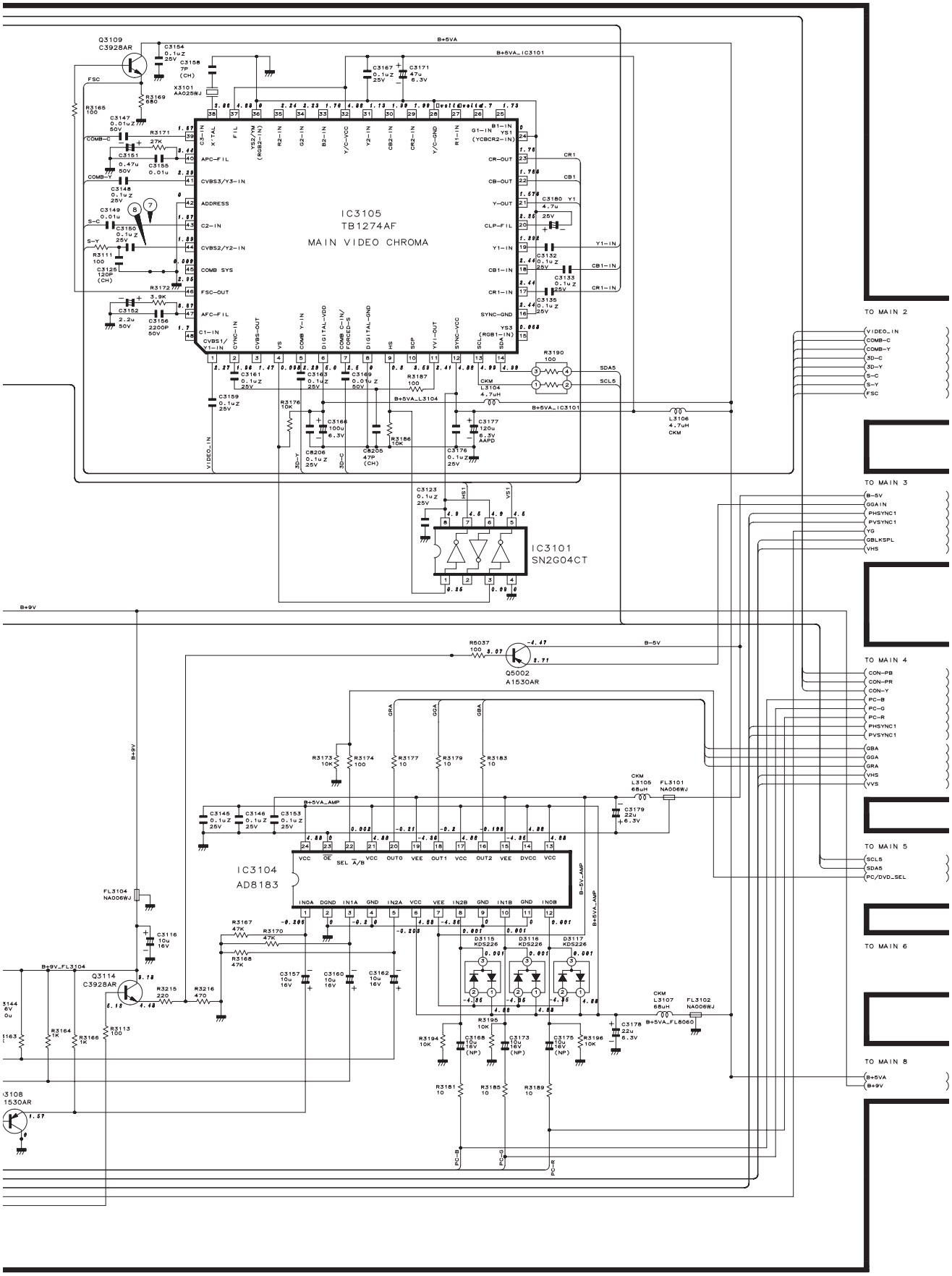
SC9101:DD(1)PIN
(CWY1)
H : 500 s/div
V : 2V/div



SC9101:DD(4)PIN
(CWCTR)
H : 200 s/div
V : 2V/div

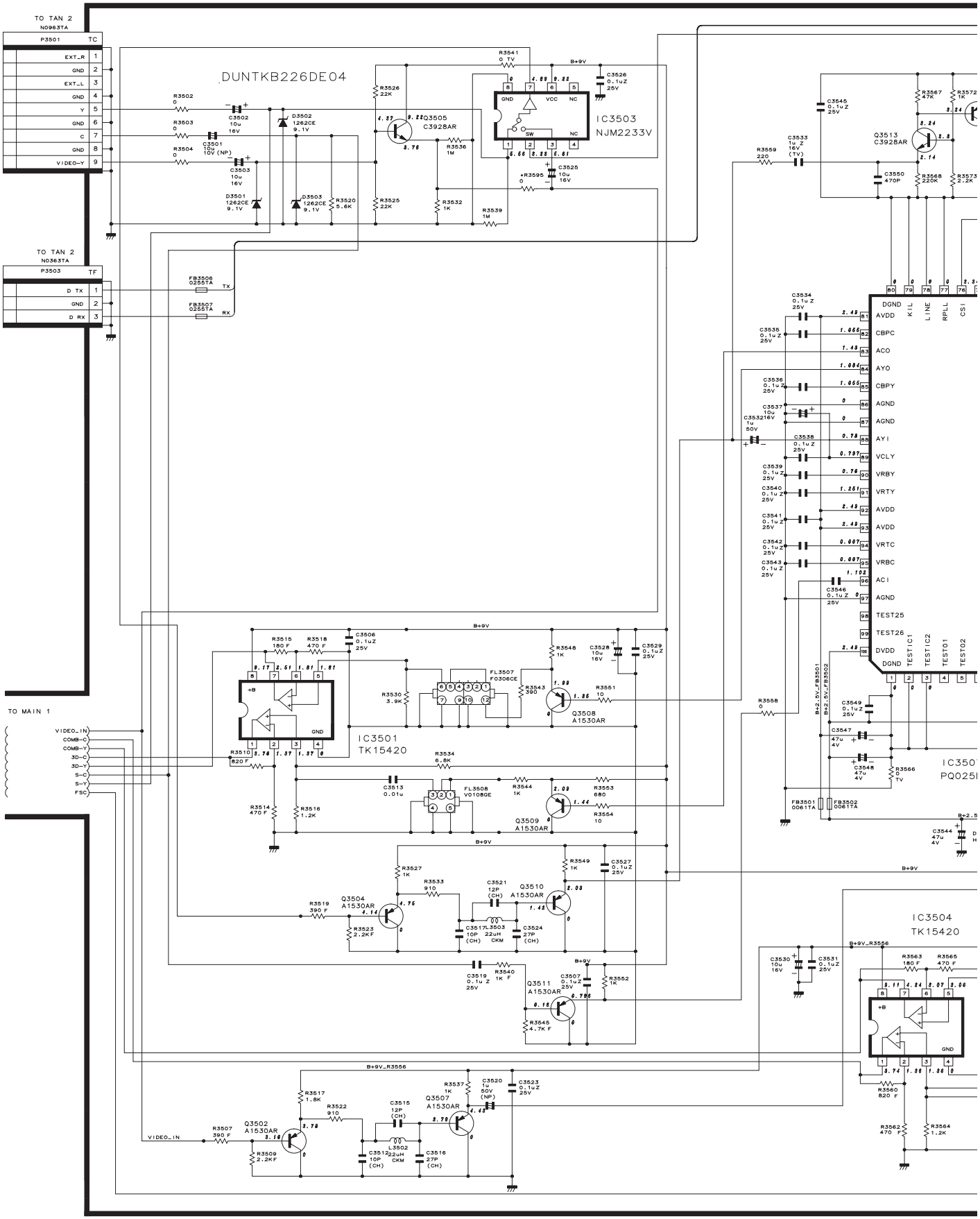
■ MAIN UNIT / HAUPT-EINHEIT -1/8

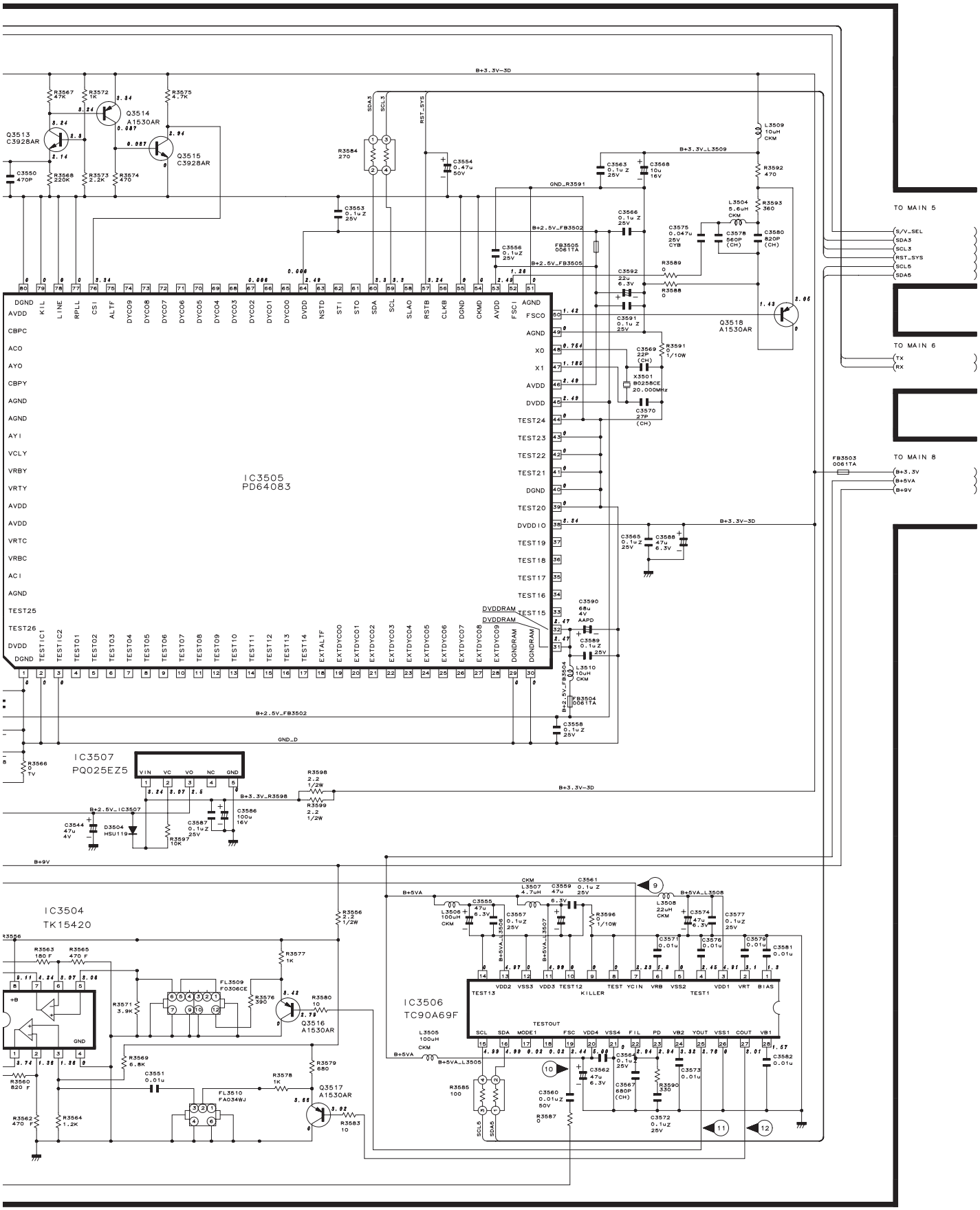




10	11	12	13	14	15	16	17	18	19

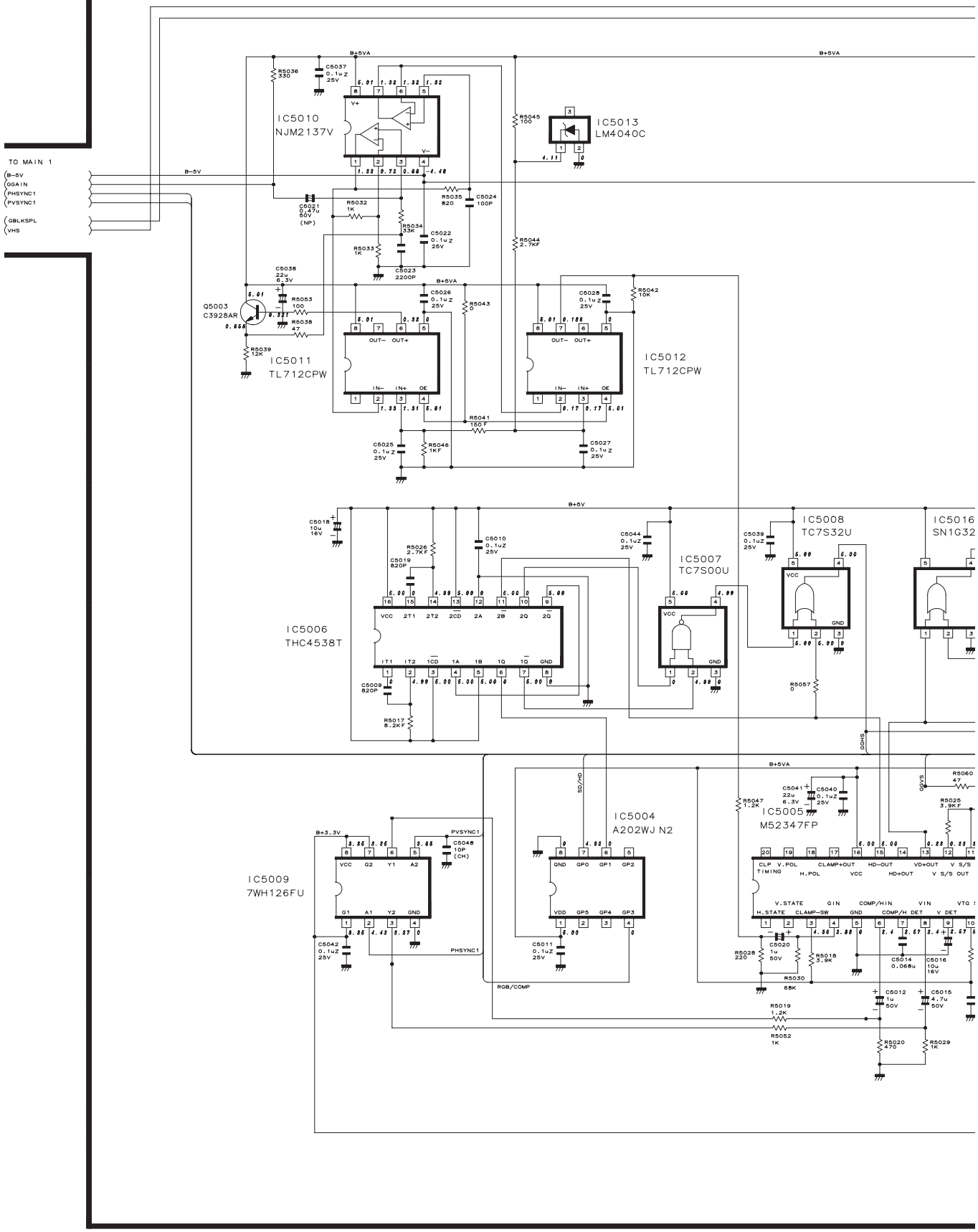
■ MAIN UNIT / HAUPT-EINHEIT -2/8

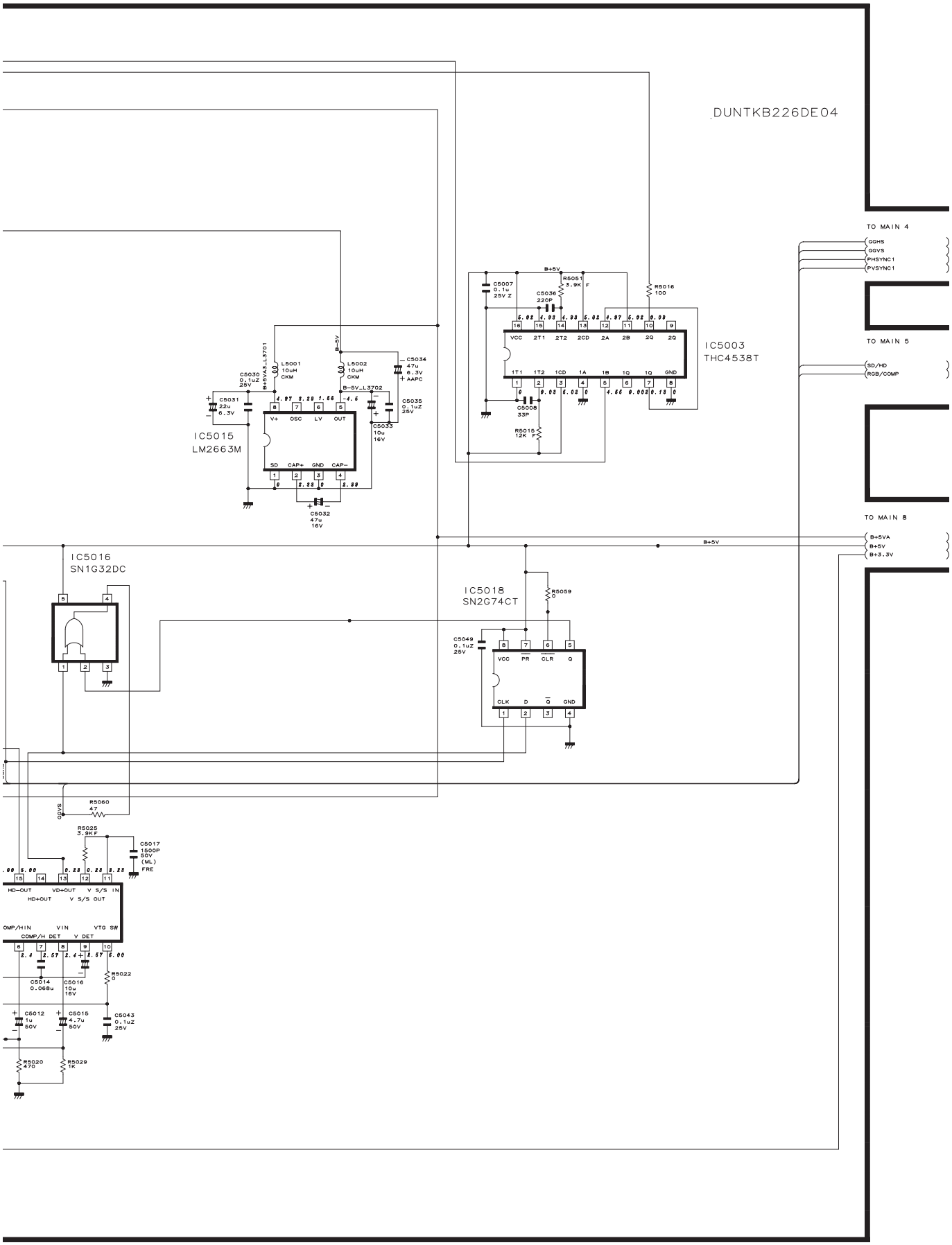




10	11	12	13	14	15	16	17	18	19

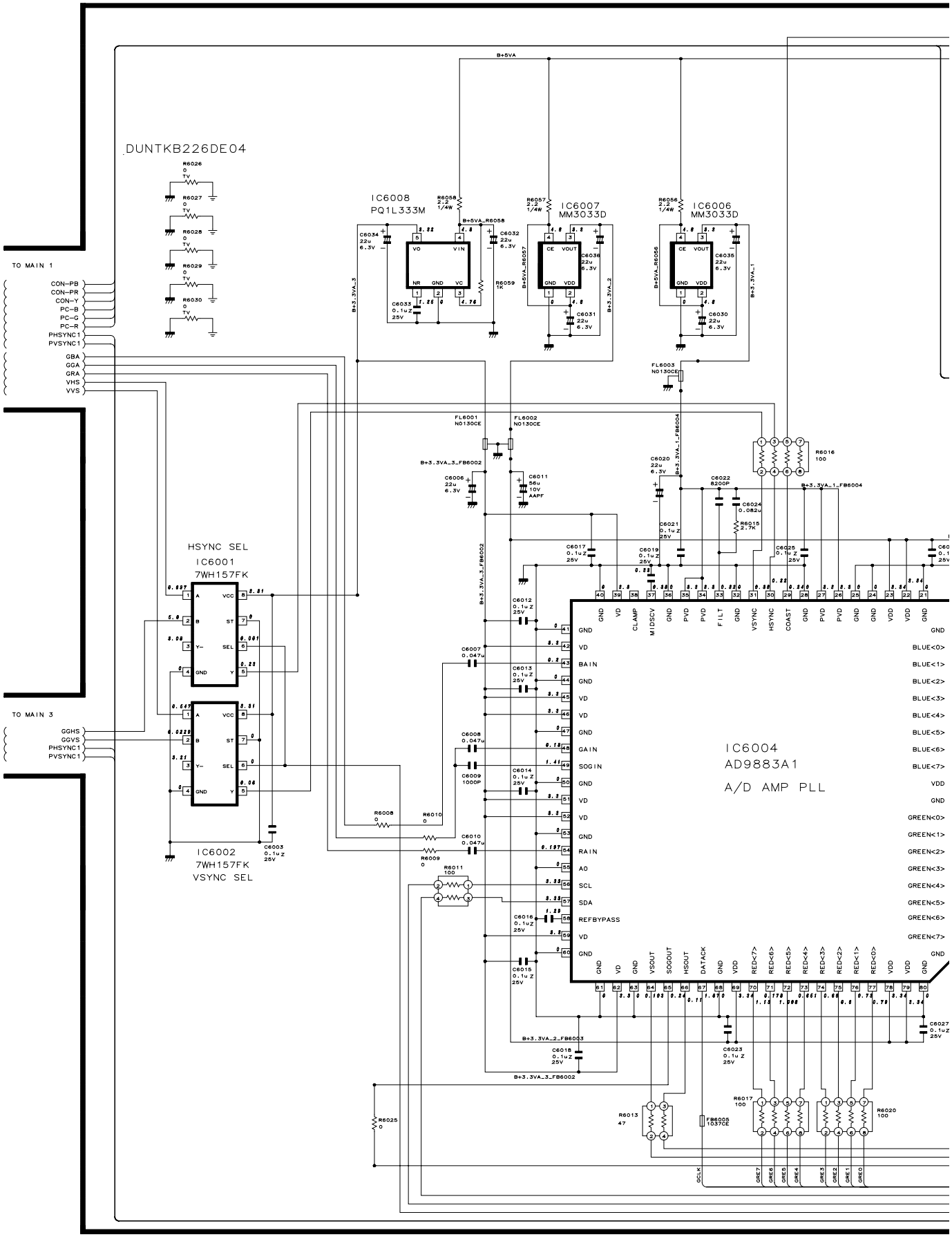
■ MAIN UNIT / HAUPT-EINHEIT -3/8

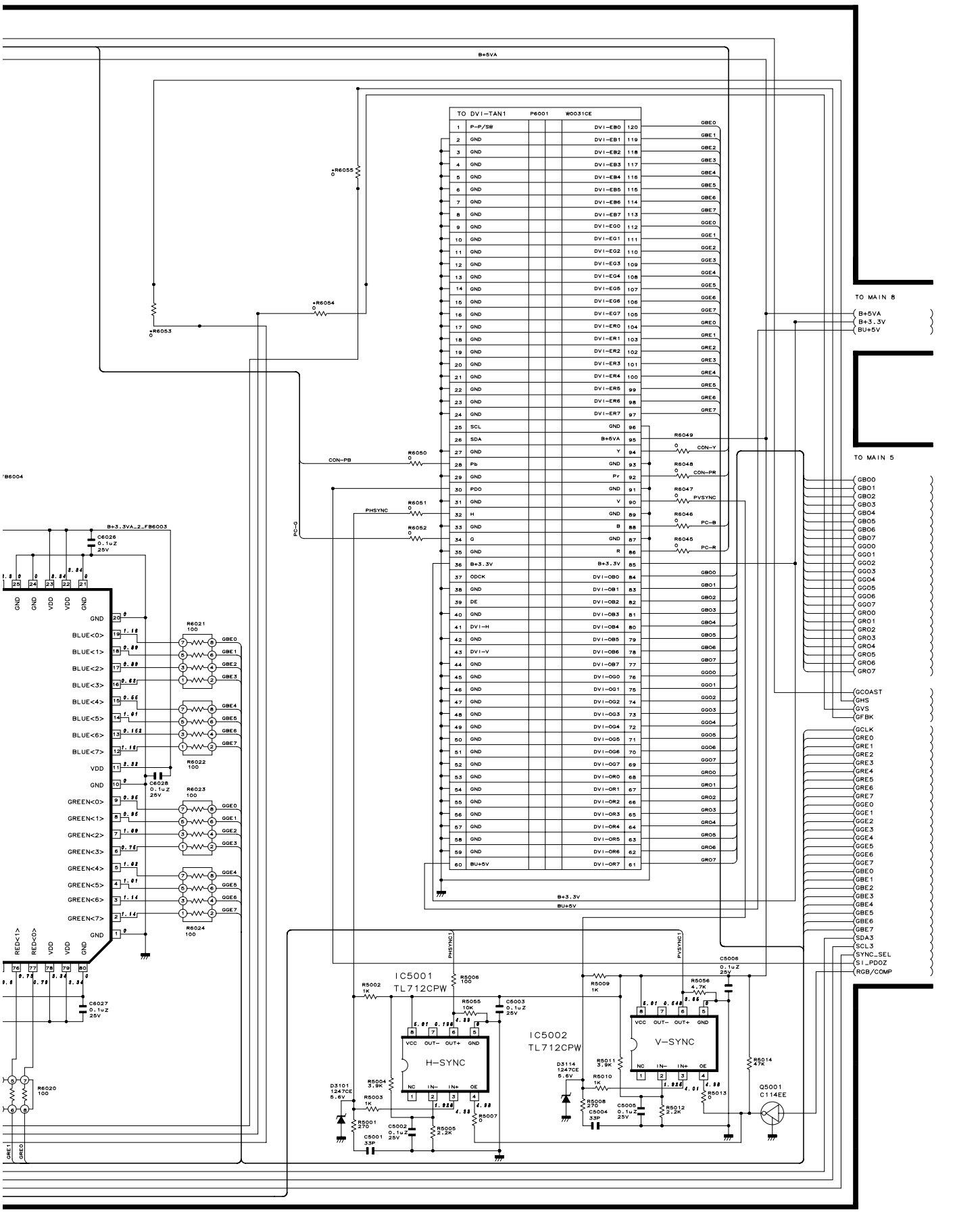




10	11	12	13	14	15	16	17	18	19

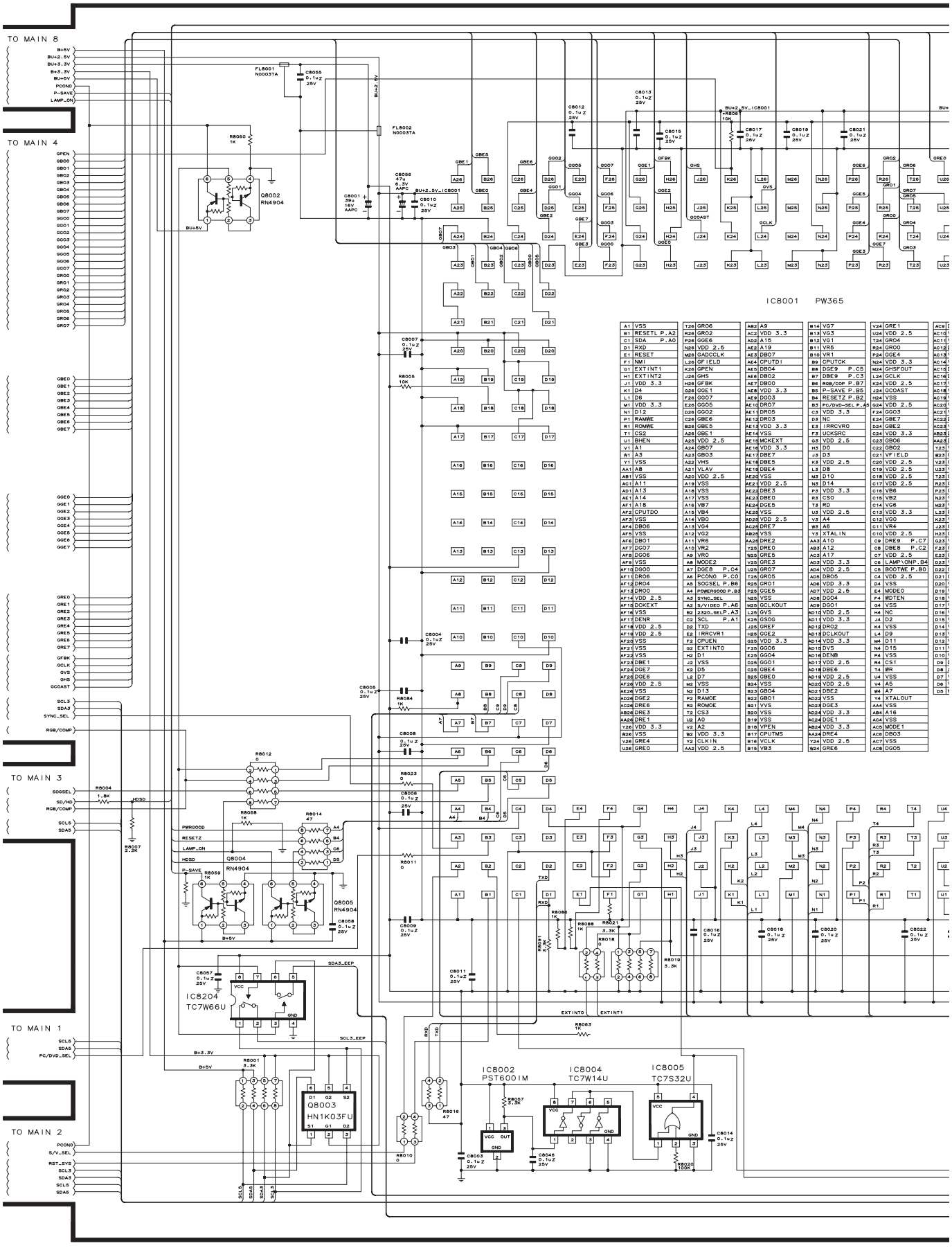
■ MAIN UNIT / HAUPT-EINHEIT -4/8

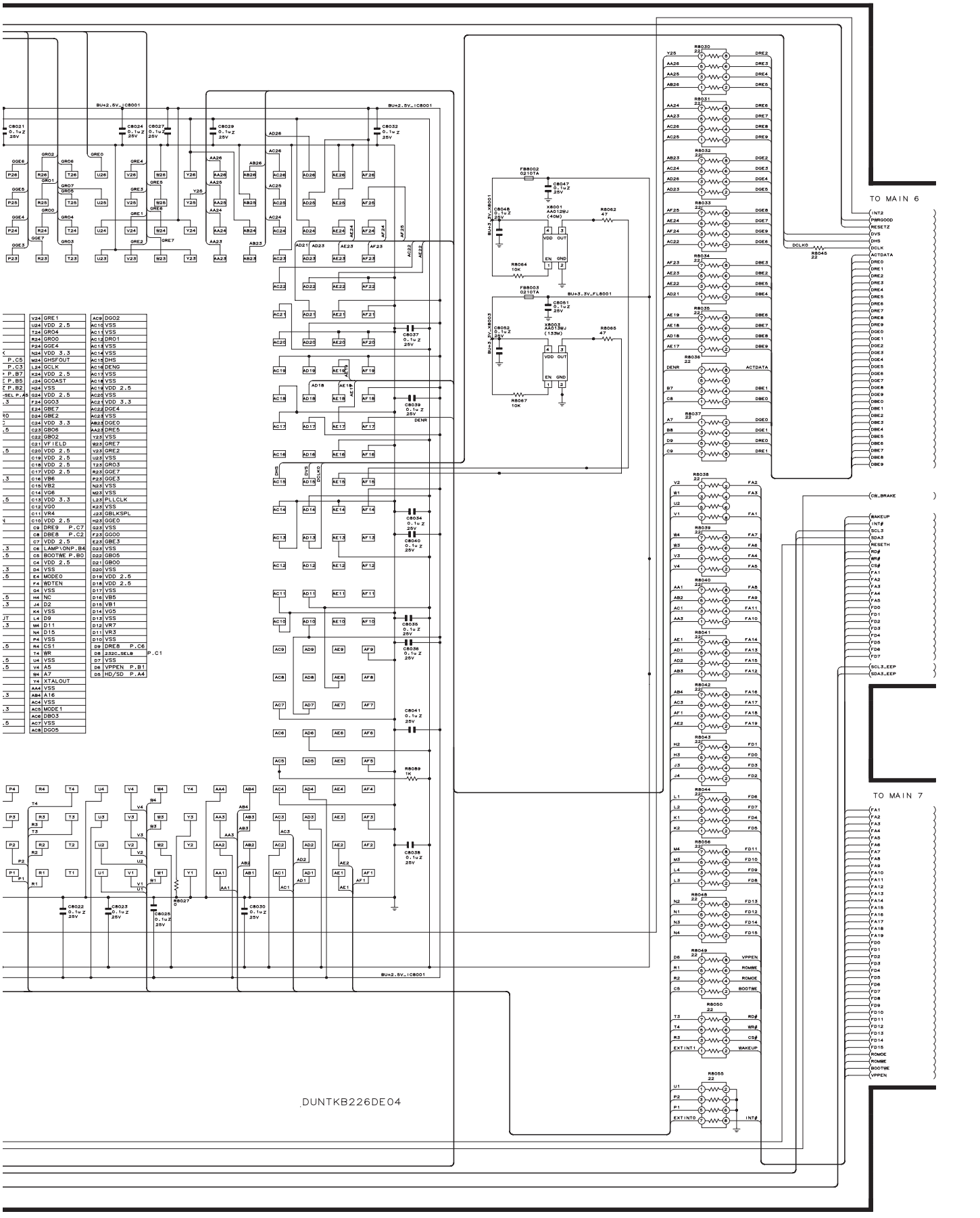




10	11	12	13	14	15	16	17	18	19

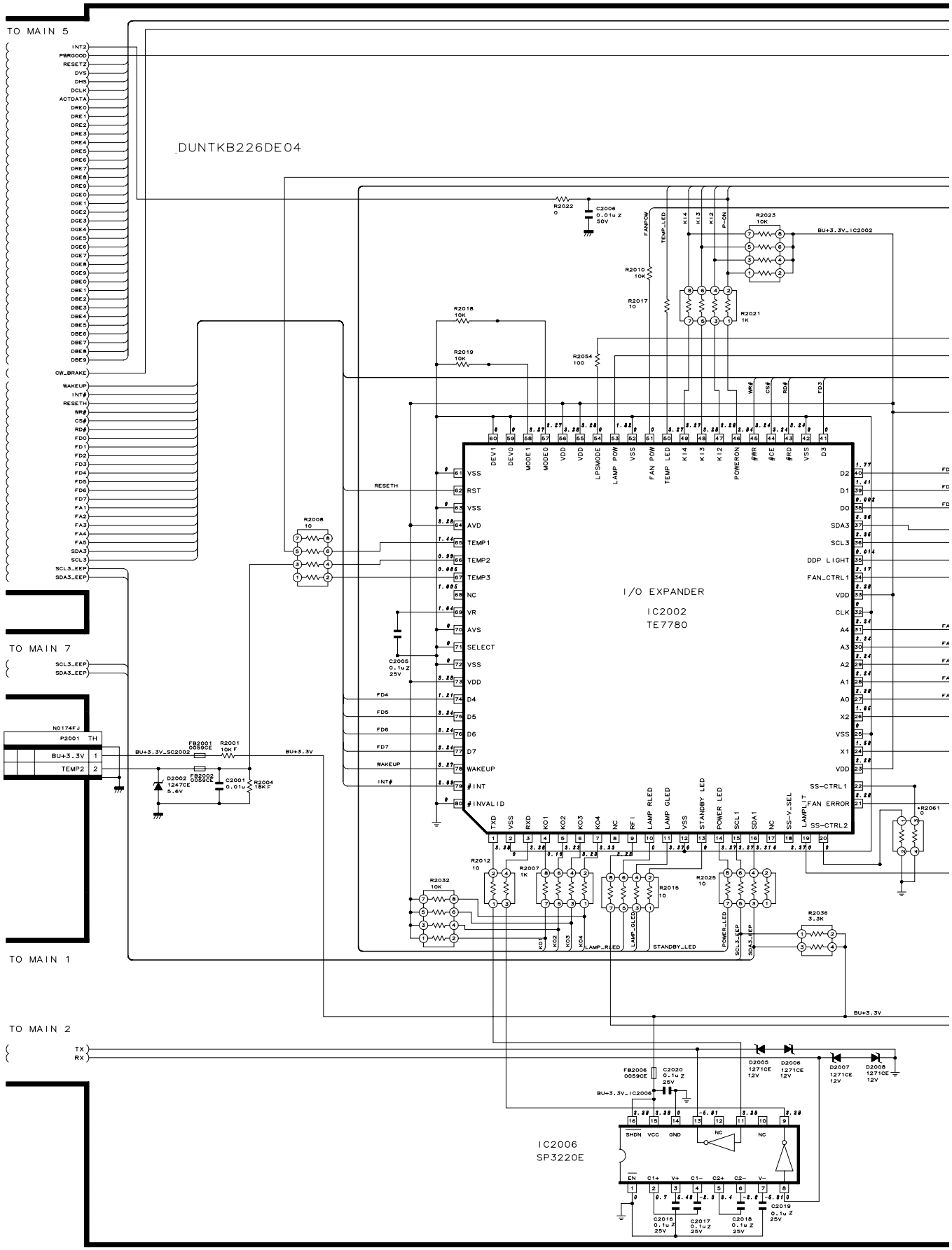
■ MAIN UNIT / HAUPT-EINHEIT -5/8

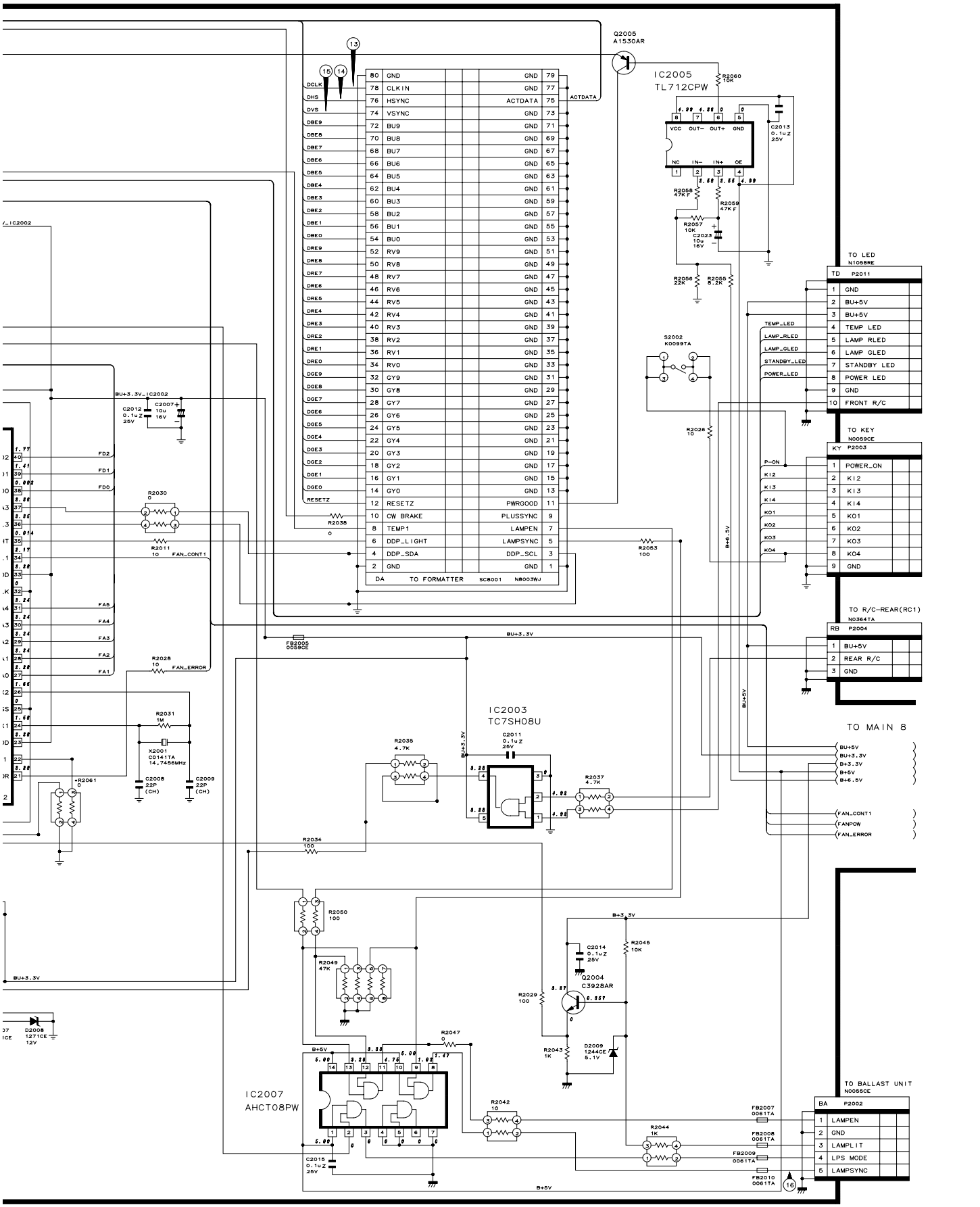




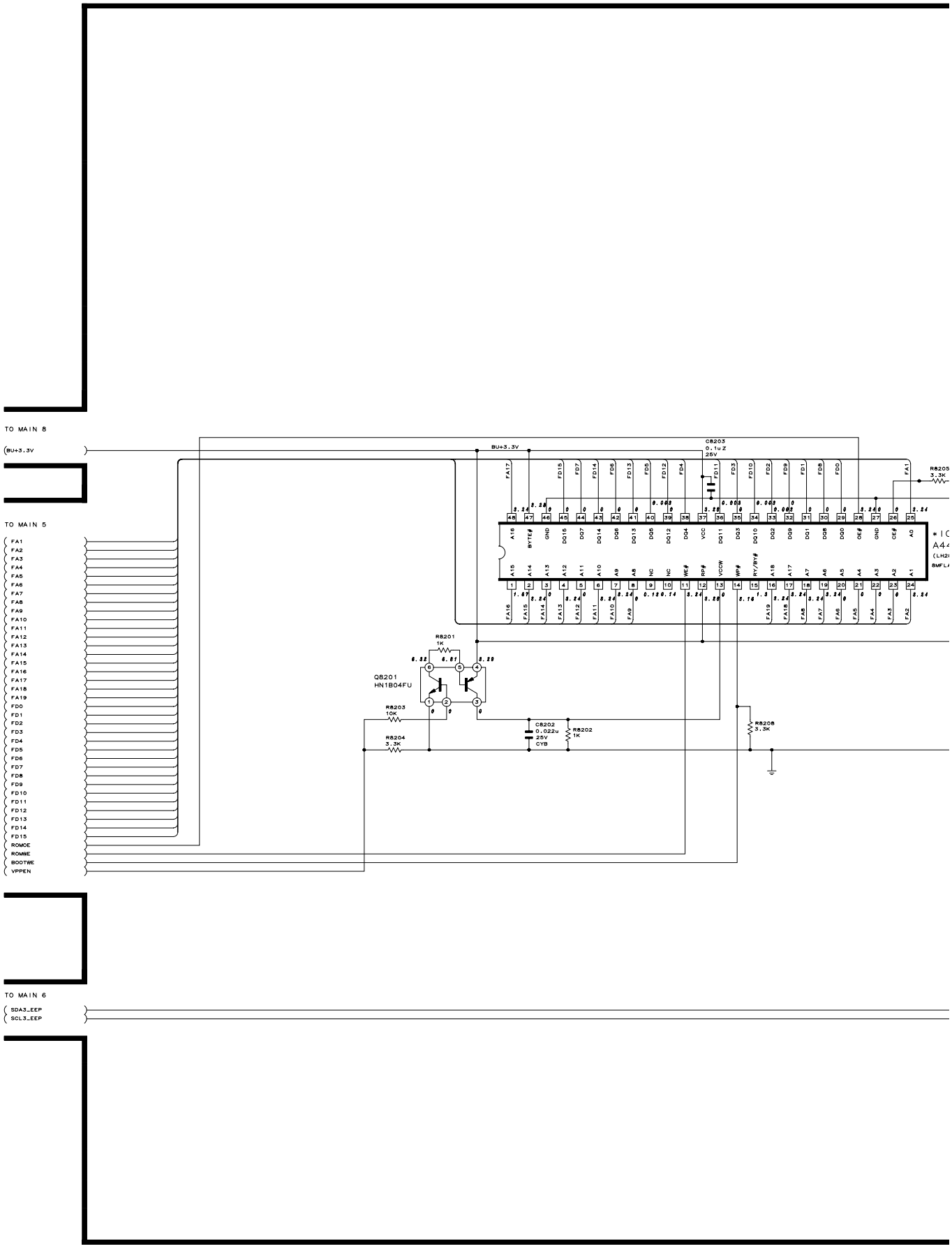
10	11	12	13	14	15	16	17	18	19

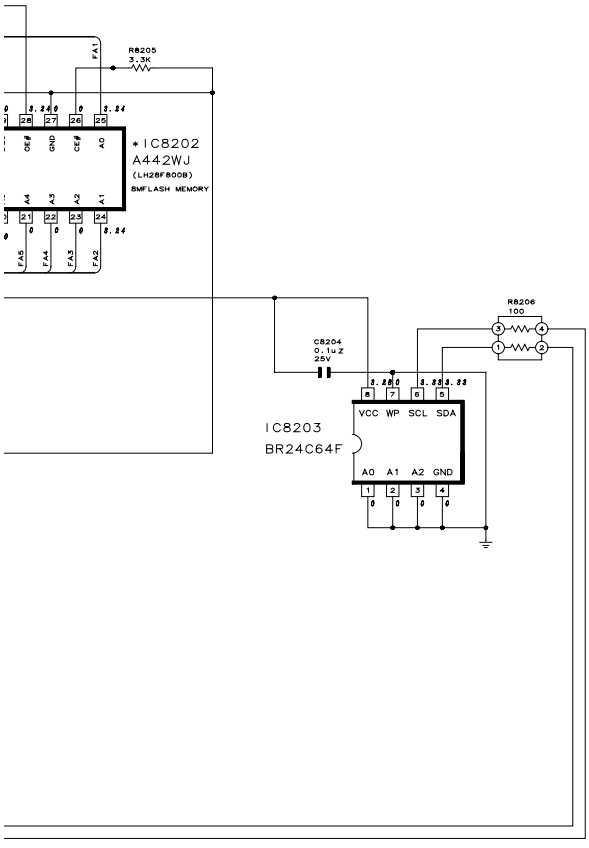
■ MAIN UNIT / HAUPT-EINHEIT -6/8




IC2005
TL712CPW
Q2005
A1530AR
IC2003
TC7SH08U
IC2007
AHCT08PW
Q2004
C3928AR
TO LED
N1058RE
TO KEY
N0059CE
TO R/C-REAR(RC1)
N0364TA
TO MAIN 8
TO BALLAST UNIT
N0055CE
TO FORMATTER
SC8001
NB6039WJ
ACTDATA
FAN_CONT1
FAN_ERROR
FANPOW
LAMPEN
LAMPLIT
LPS MODE
LAMPSYNC
BU+3.3V
BU+5V
B+3.3V
B+5V
B+6.5V

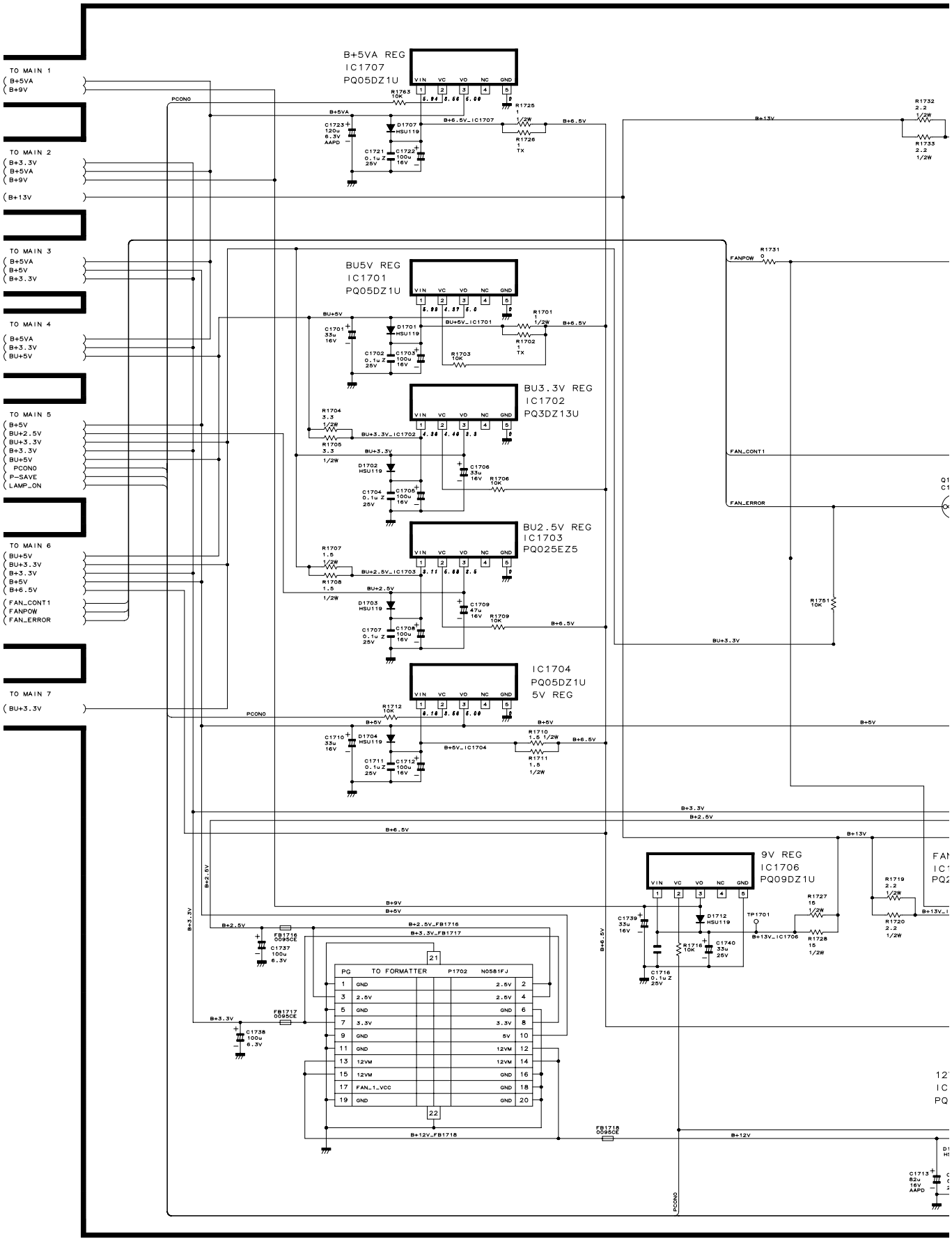
■ MAIN UNIT / HAUPT-EINHEIT -7/8

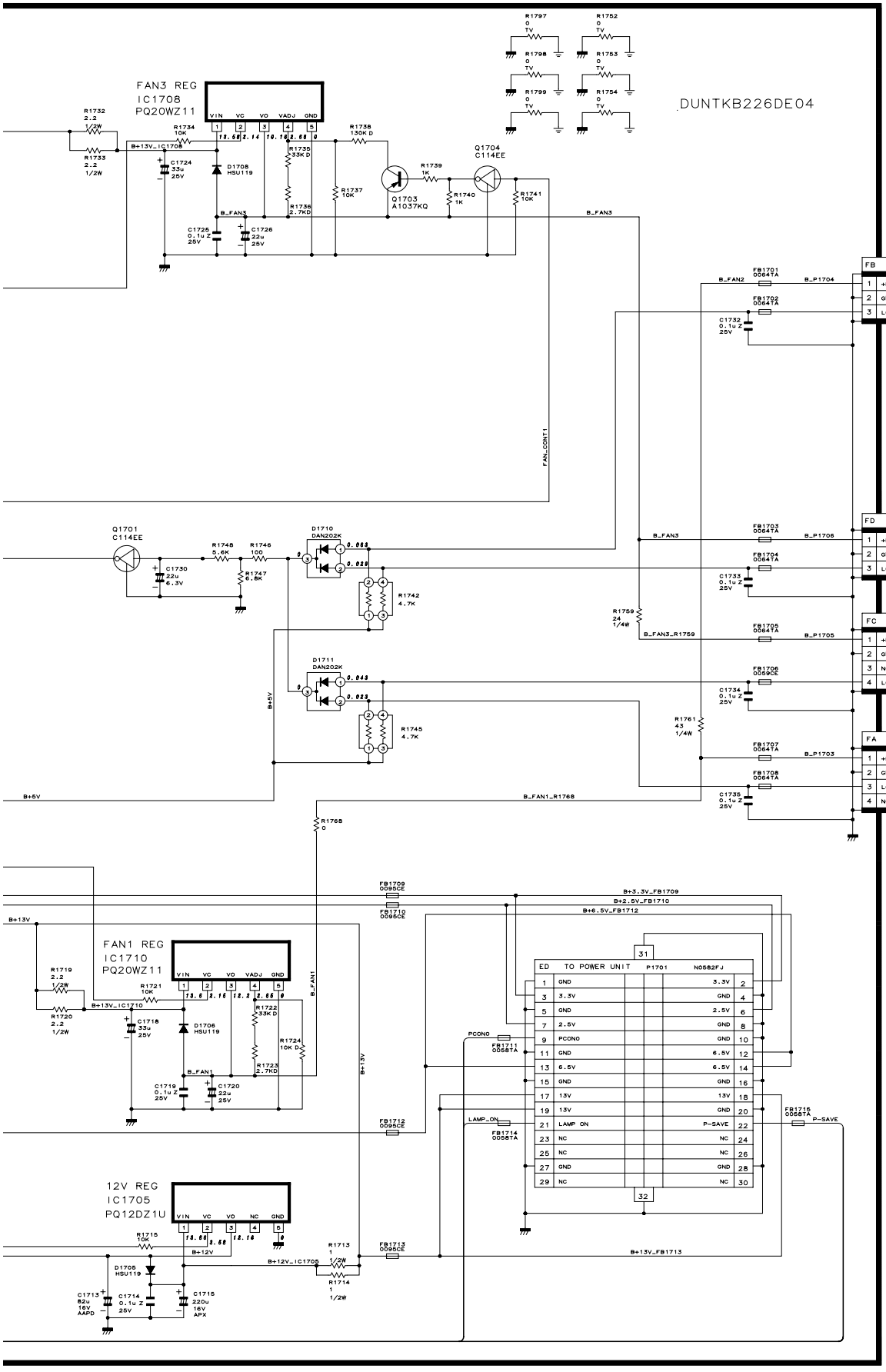




DUNTKB226DE04

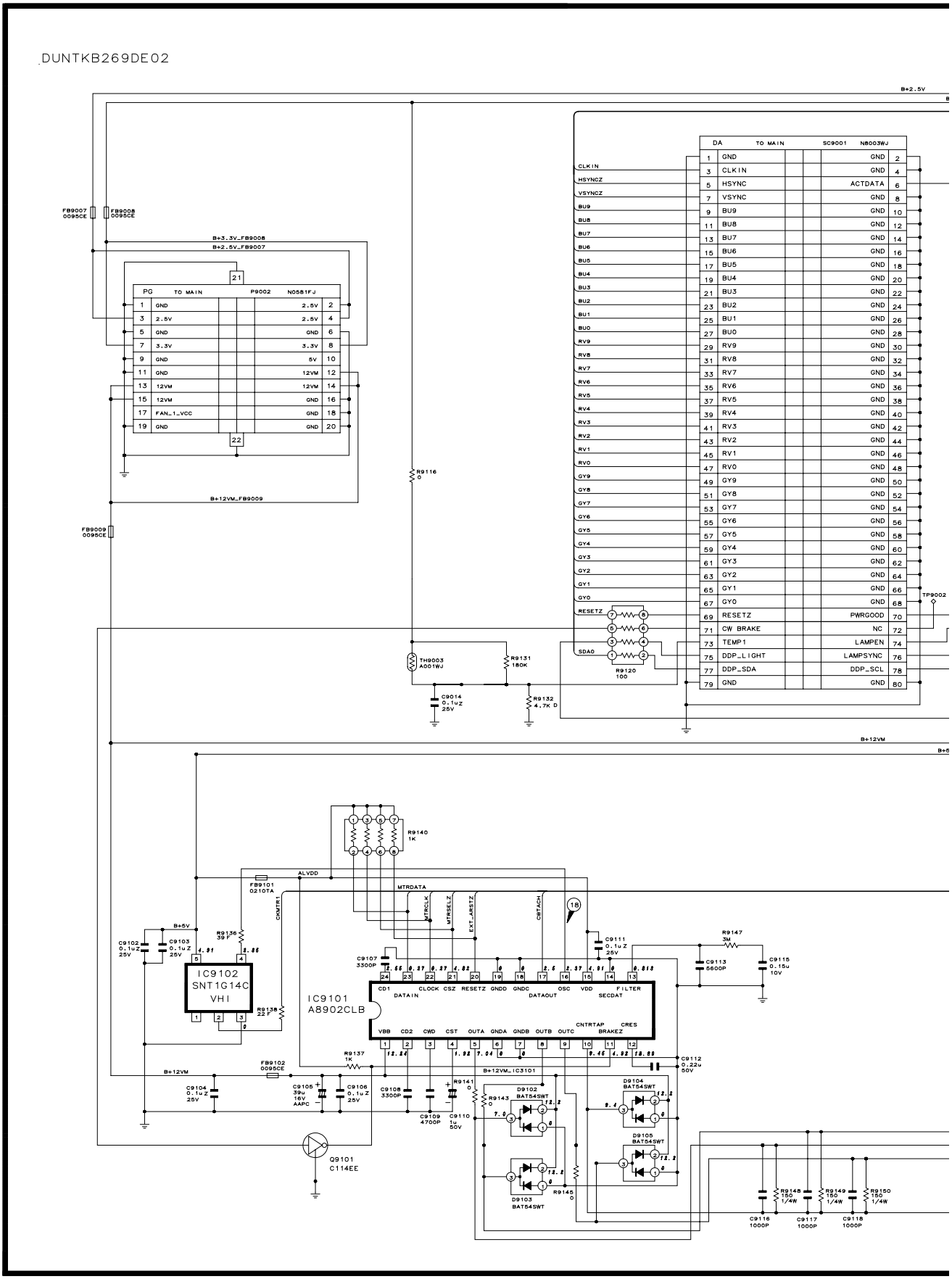
■ MAIN UNIT / HAUPT-EINHEIT -8/8

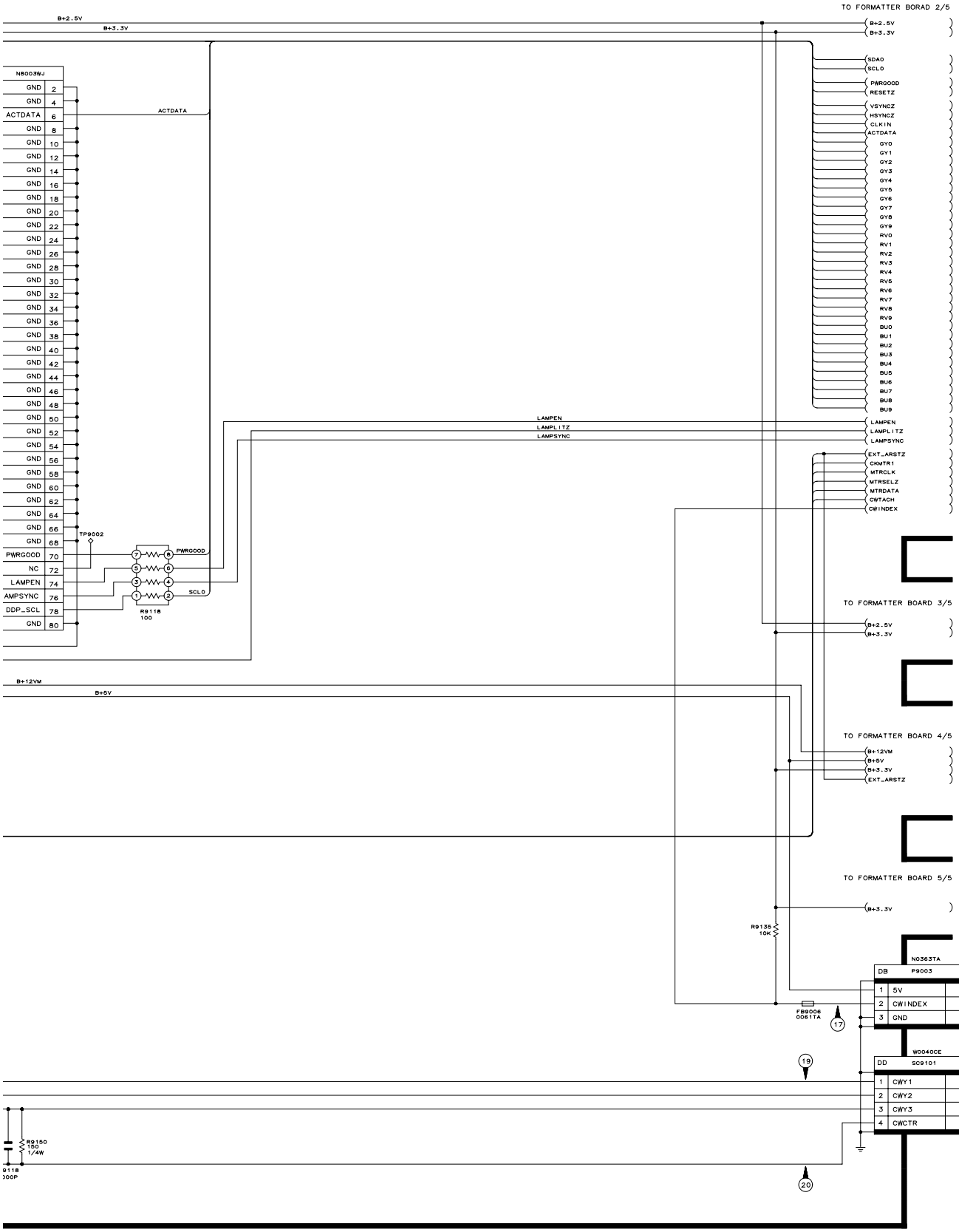




10	11	12	13	14	15	16	17	18	19

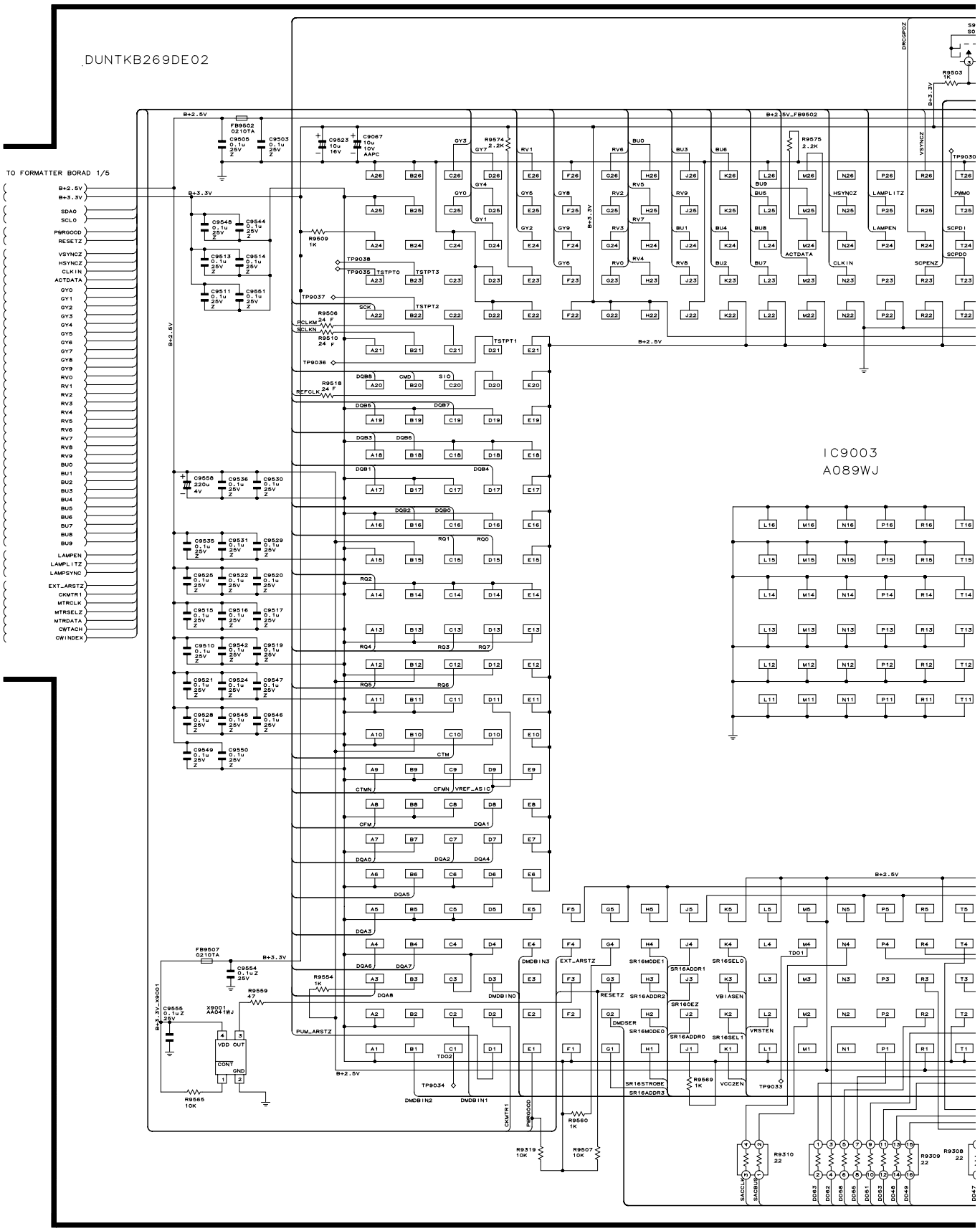
■ FORMATTER UNIT / FORMATTER-EINHEIT-1/5

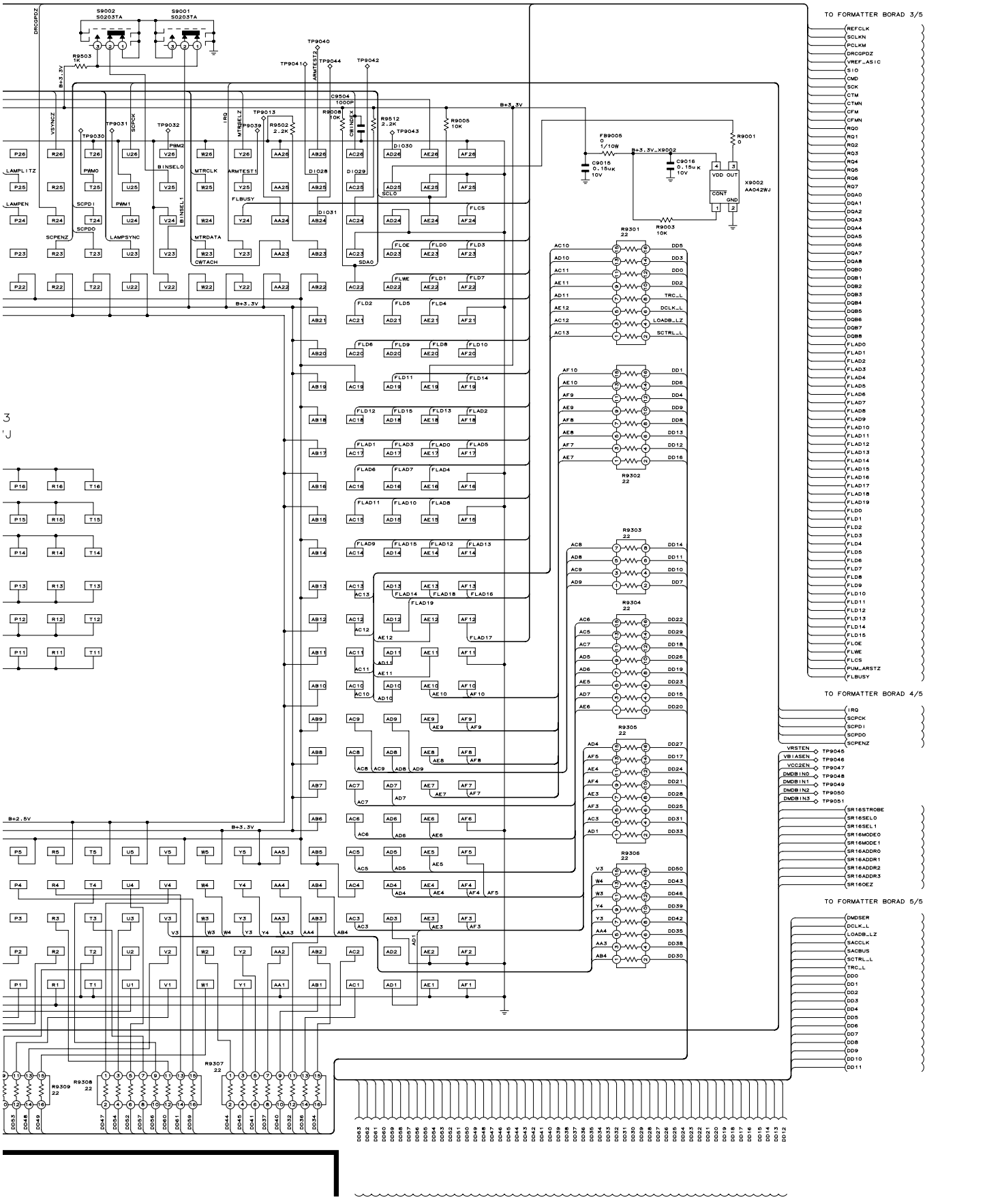




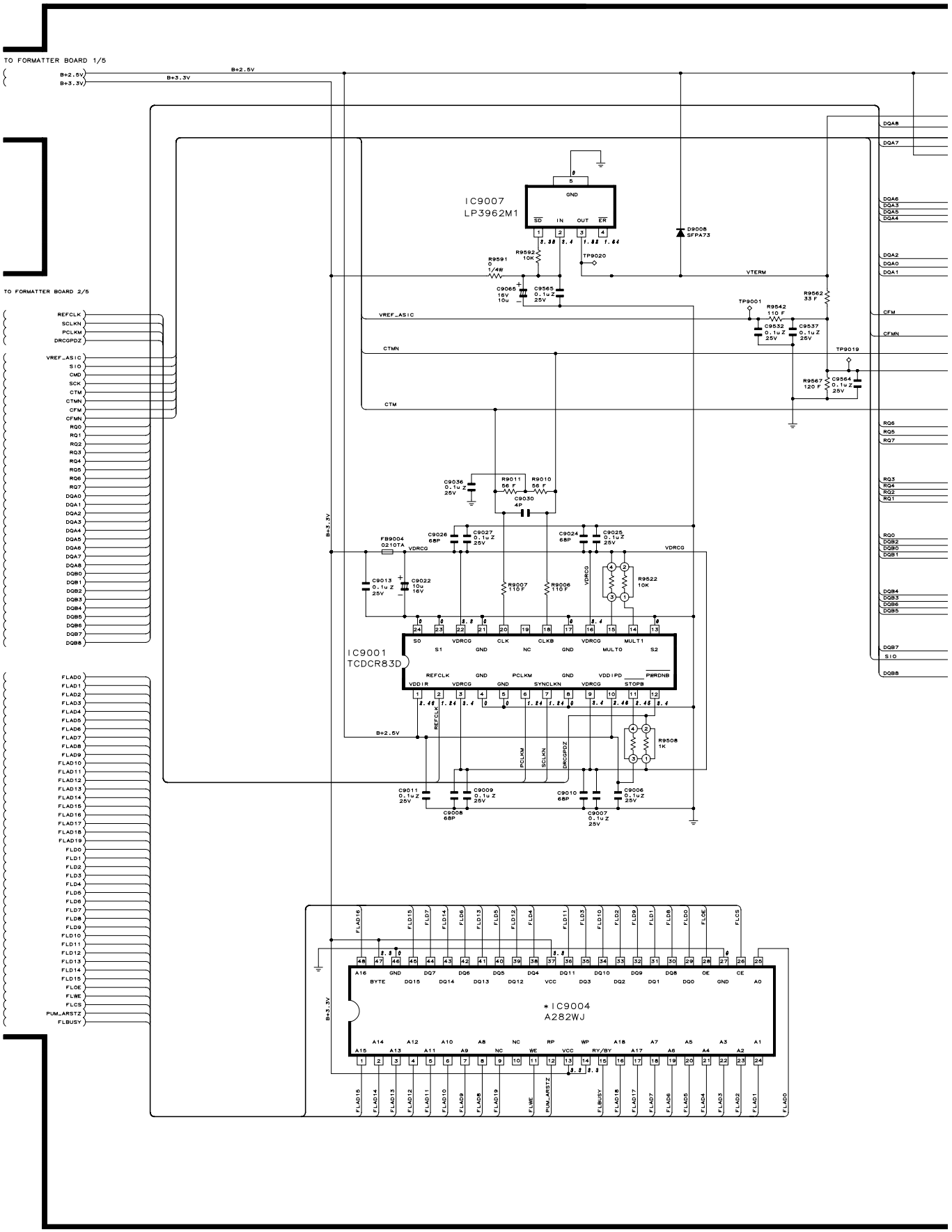
10	11	12	13	14	15	16	17	18	19

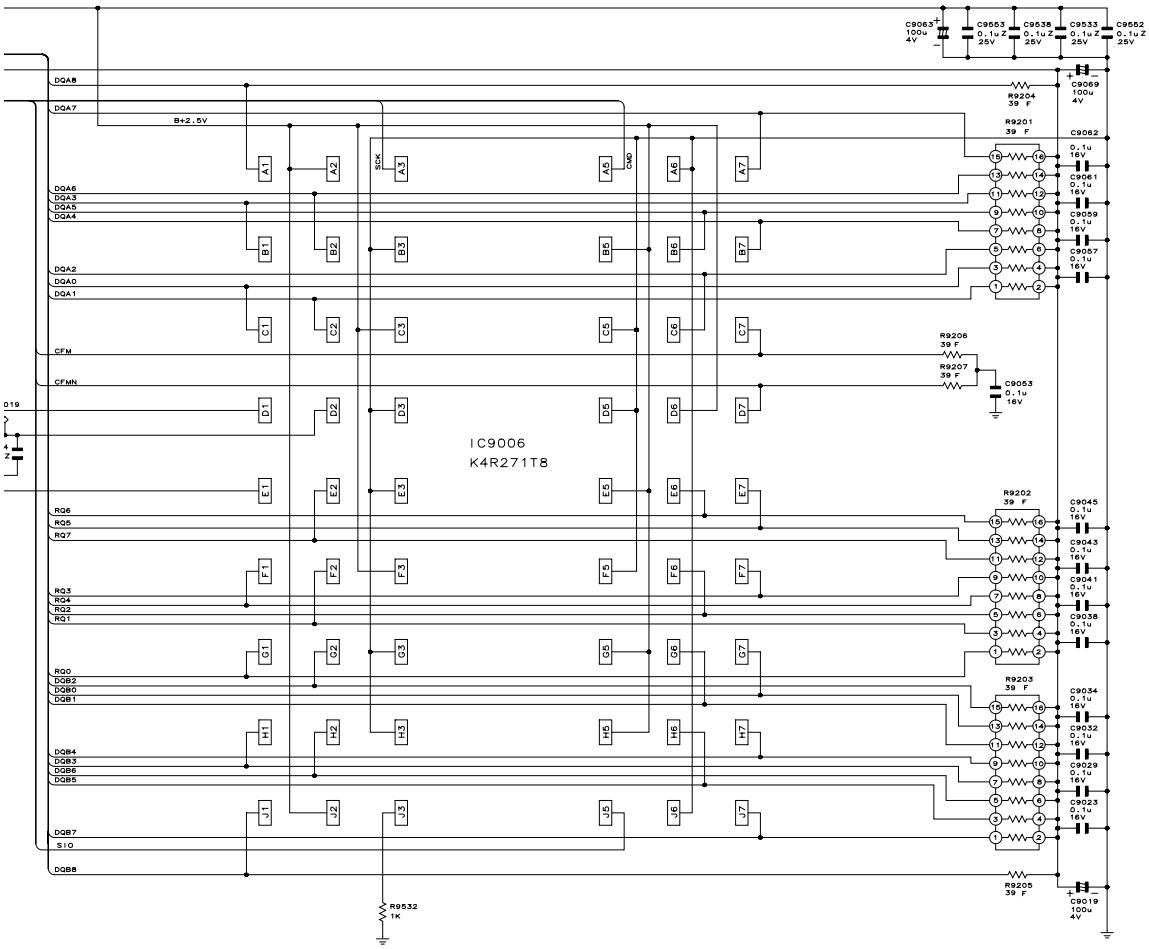
■ FORMATTER UNIT / FORMATTER-EINHEIT-2/5




TO FORMATTER BORAD 3/5
TO FORMATTER BORAD 4/5
TO FORMATTER BORAD 5/5
B+3.3V
B+2.5V
S9002
S9001
R9503
TP9040
TP9041
TP9044
TP9042
C9504
R9008
R9512
R9005
TP9043
TP9030
TP9031
TP9032
TP9013
TP9039
R9502
FB9005
C9015
C9016
X9002
R9001
R9003
R9301
R9302
R9303
R9304
R9305
R9306
R9307
R9308
R9309
REFCLK
SCLKN
PCLKM
DRCGPDZ
VREF_ASIC
SIO
CMD
SCK
CTM
CTMN
CFM
CFMN
RQ0
RQ1
RQ2
RQ3
RQ4
RQ5
RQ6
RQ7
DQA0
DQA1
DQA2
DQA3
DQA4
DQA5
DQA6
DQA7
DQA8
DQB0
DQB1
DQB2
DQB3
DQB4
DQB5
DQB6
DQB7
DQB8
FLAD0
FLAD1
FLAD2
FLAD3
FLAD4
FLAD5
FLAD6
FLAD7
FLAD8
FLAD9
FLAD10
FLAD11
FLAD12
FLAD13
FLAD14
FLAD15
FLAD16
FLAD17
FLAD18
FLAD19
FLD0
FLD1
FLD2
FLD3
FLD4
FLD5
FLD6
FLD7
FLD8
FLD9
FLD10
FLD11
FLD12
FLD13
FLD14
FLD15
FLOE
FLWE
FLCS
PUM_ARSTZ
FLBUSY
IRQ
SCPCK
SCPDI
SCPDO
SCPENZ
VRSTEN
VBIASEN
VCC2EN
DMDBIN0
DMDBIN1
DMDBIN2
DMDBIN3
SR16STROBE
SR16SEL0
SR16SEL1
SR16MODE0
SR16MODE1
SR16ADDR0
SR16ADDR1
SR16ADDR2
SR16ADDR3
SR16OEZ
DMDSER
DCLK_L
LOADB_LZ
SACCLK
SACBUS
SCTRL_L
TRC_L
DCLK_L
LOADB_LZ
SCTRL_L
TRC_L

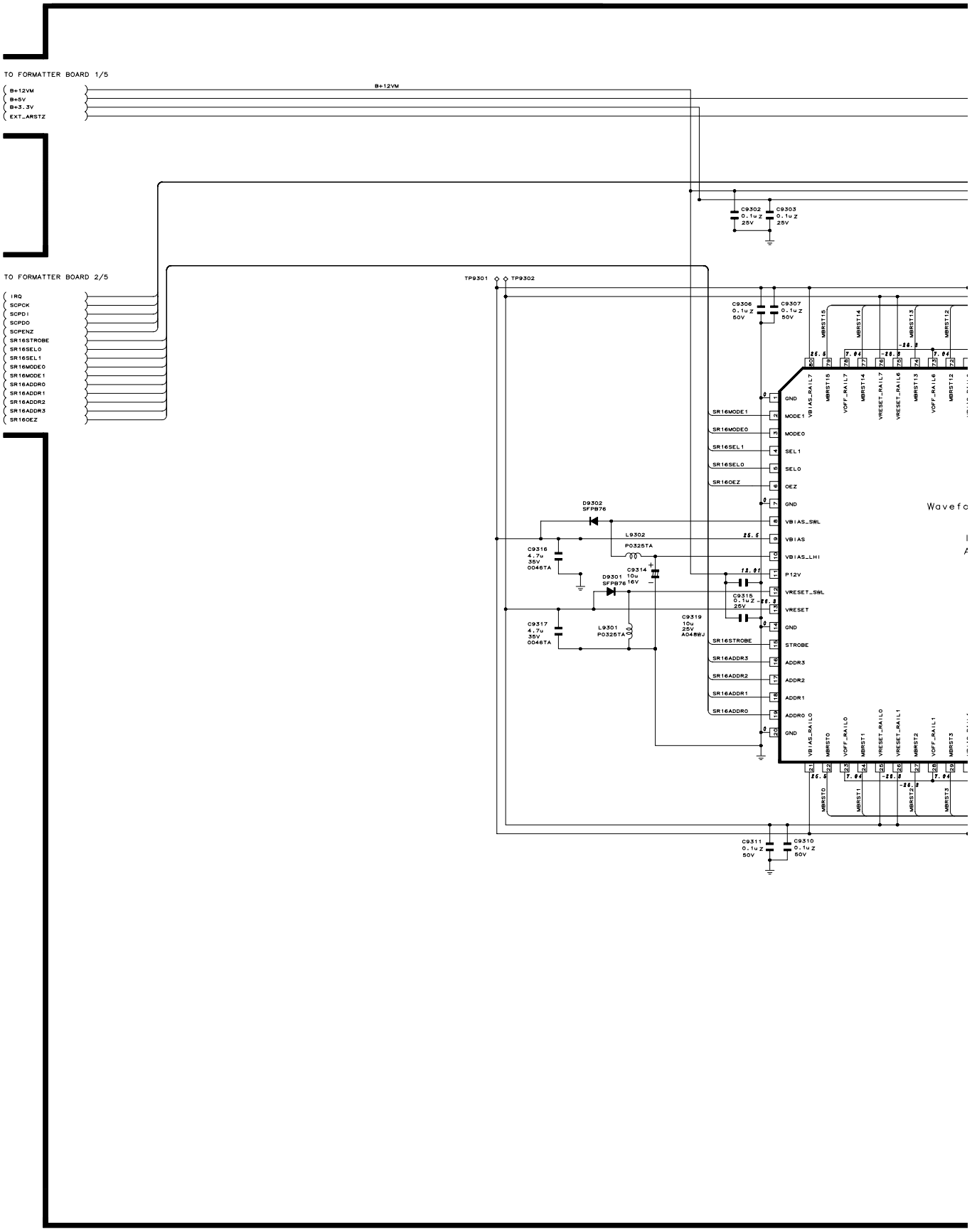
■ FORMATTER UNIT / FORMATTER-EINHEIT-3/5

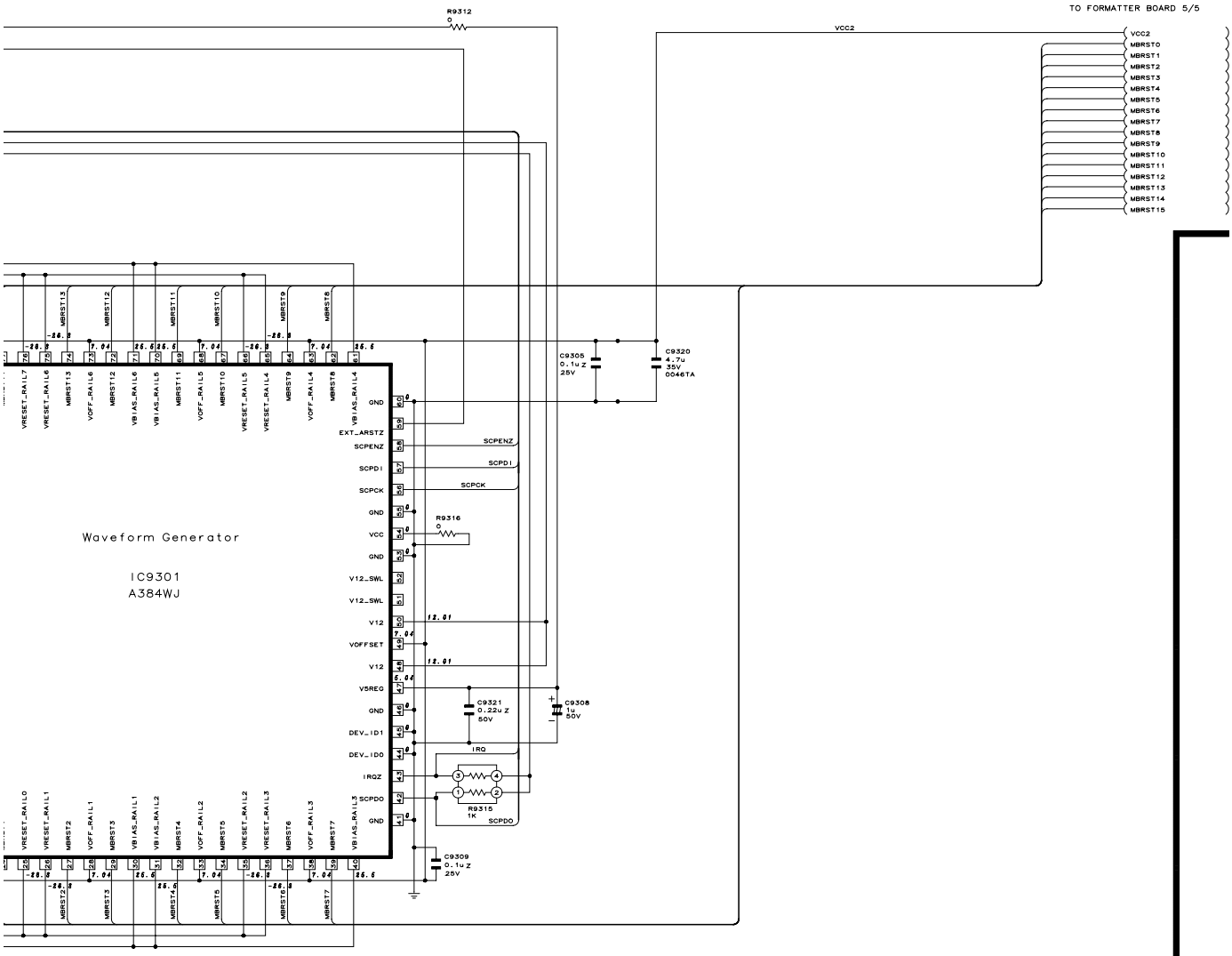




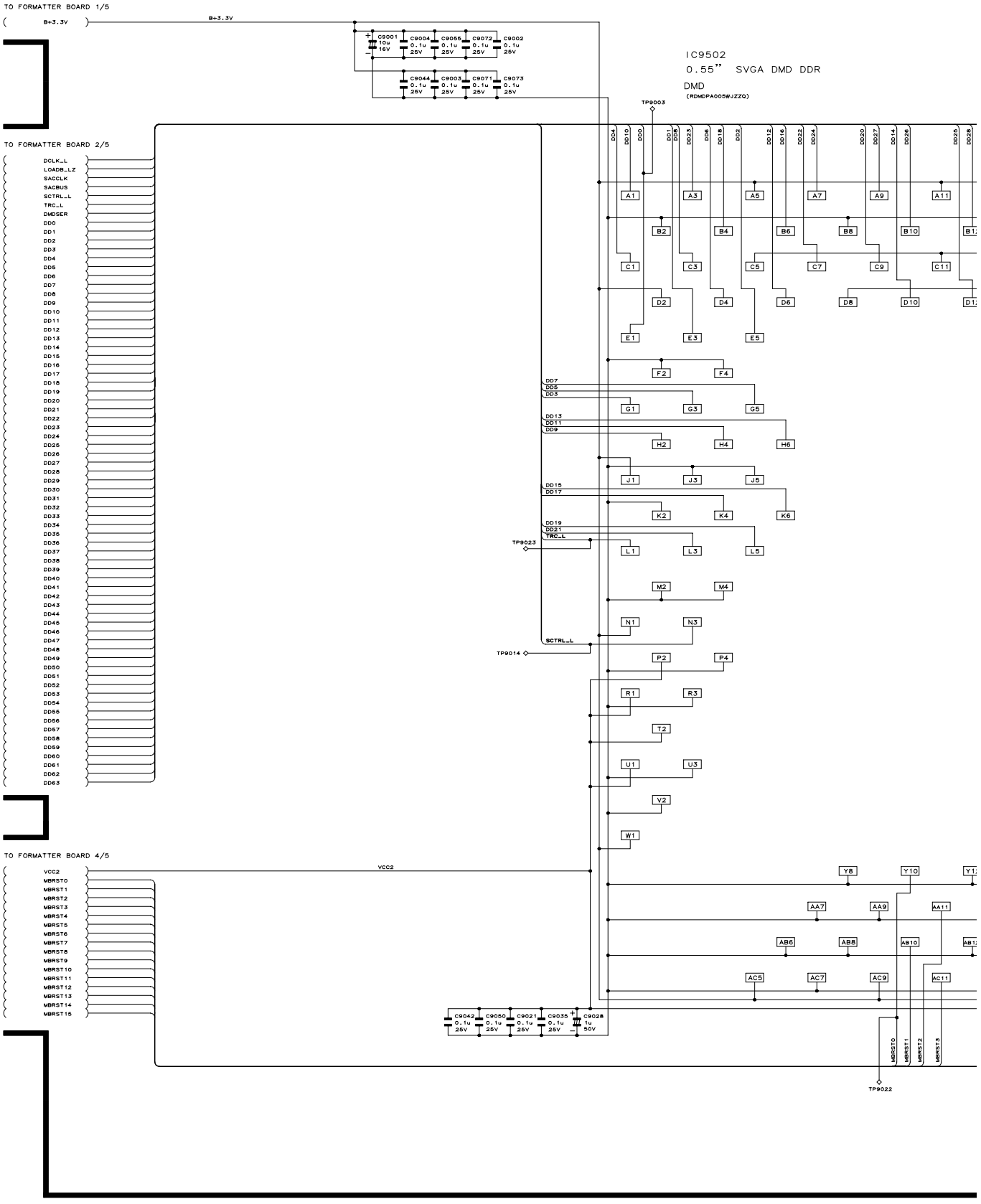
DUNTKB269DE02

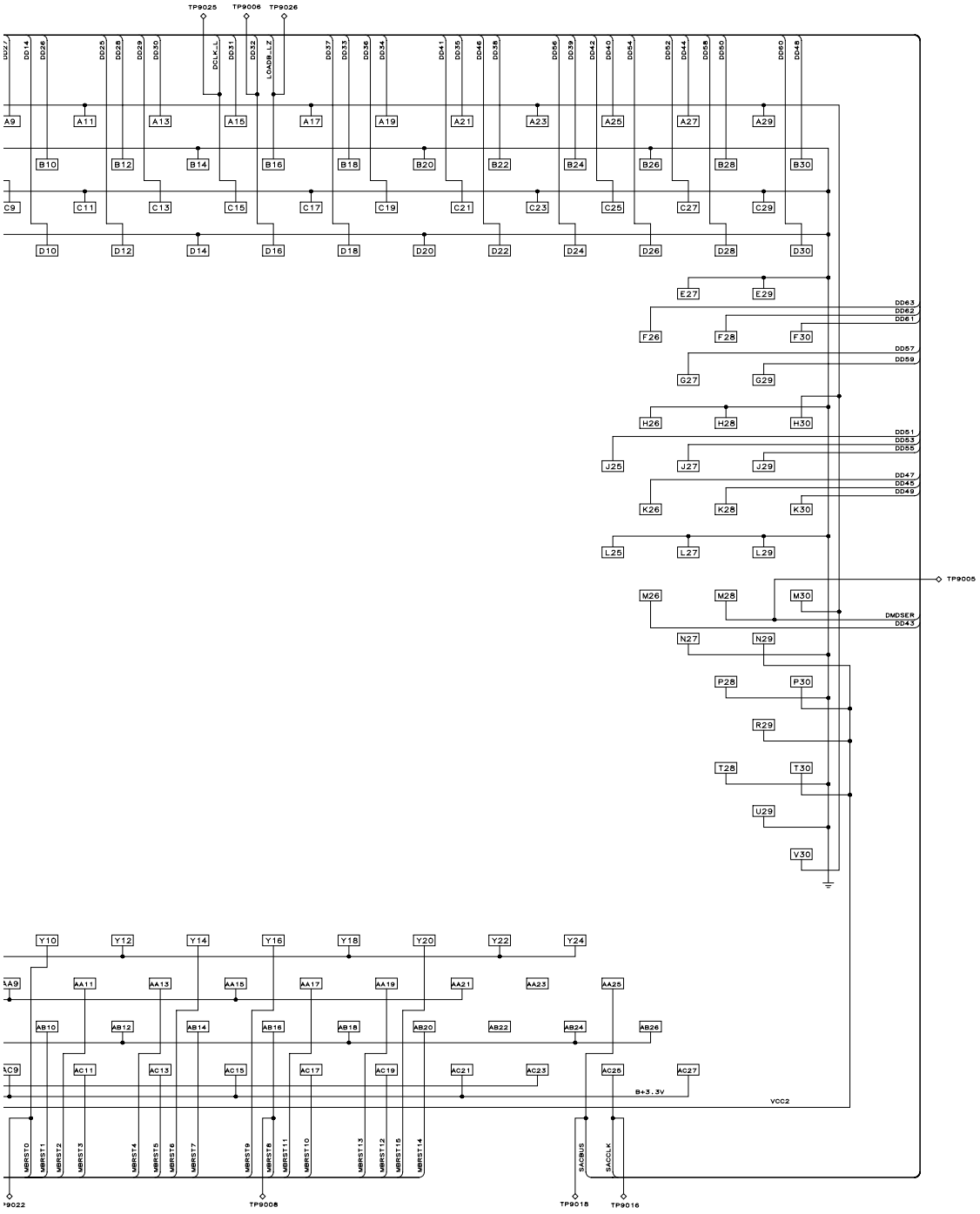
■ FORMATTER UNIT / FORMATTER-EINHEIT-4/5




TO FORMATTER BOARD 5/5
VCC2
MBRST0
MBRST1
MBRST2
MBRST3
MBRST4
MBRST5
MBRST6
MBRST7
MBRST8
MBRST9
MBRST10
MBRST11
MBRST12
MBRST13
MBRST14
MBRST15
R9312
0
C9305
0.1u Z
25V
C9320
4.7u
35V
0046TA
Waveform Generator
IC9301
A384WJ
EXT_ARSTZ
SCPENZ
SCPDI
SCPCK
R9316
0
C9321
0.22u Z
50V
C9308
1u
50V
IRQ
R9315
1K
SCPDO
C9309
0.1u Z
25V
DUNTKB269DE02

■ FORMATTER UNIT / FORMATTER-EINHEIT-5/5

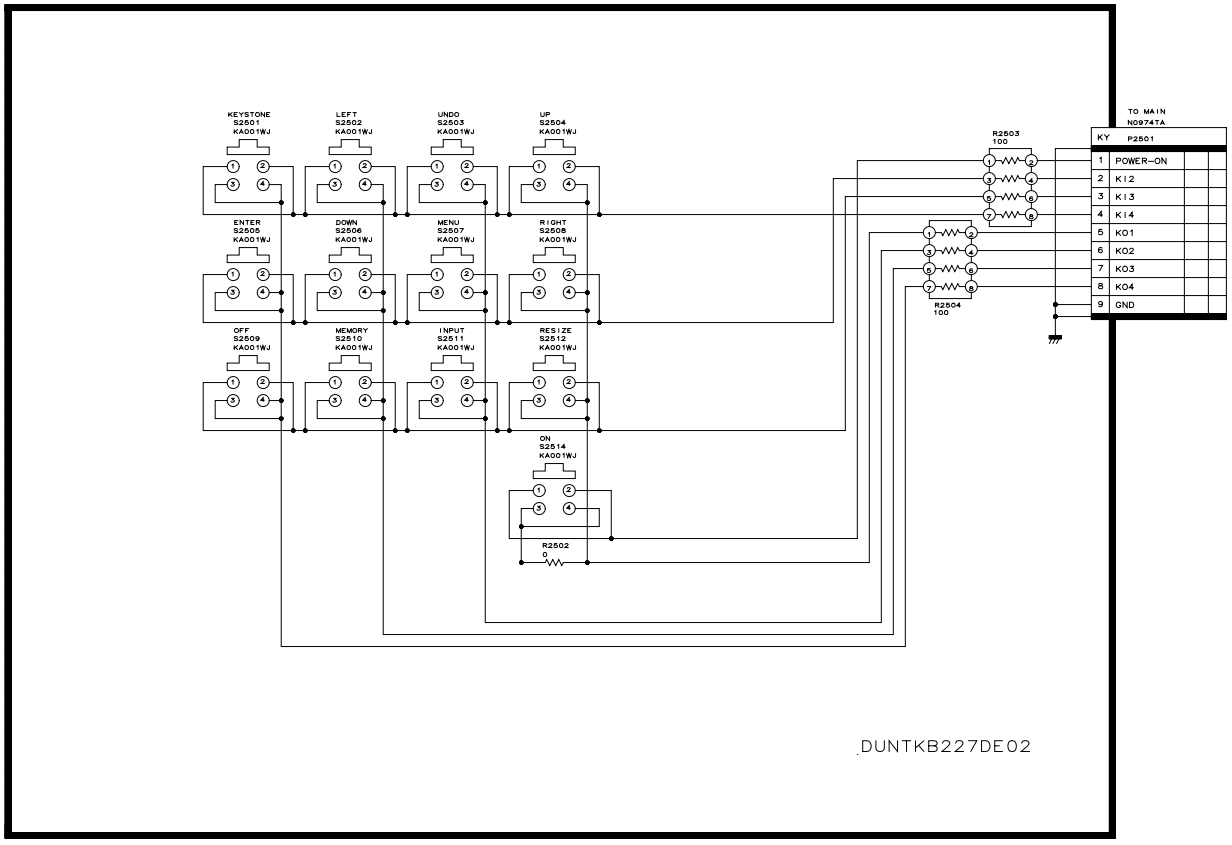




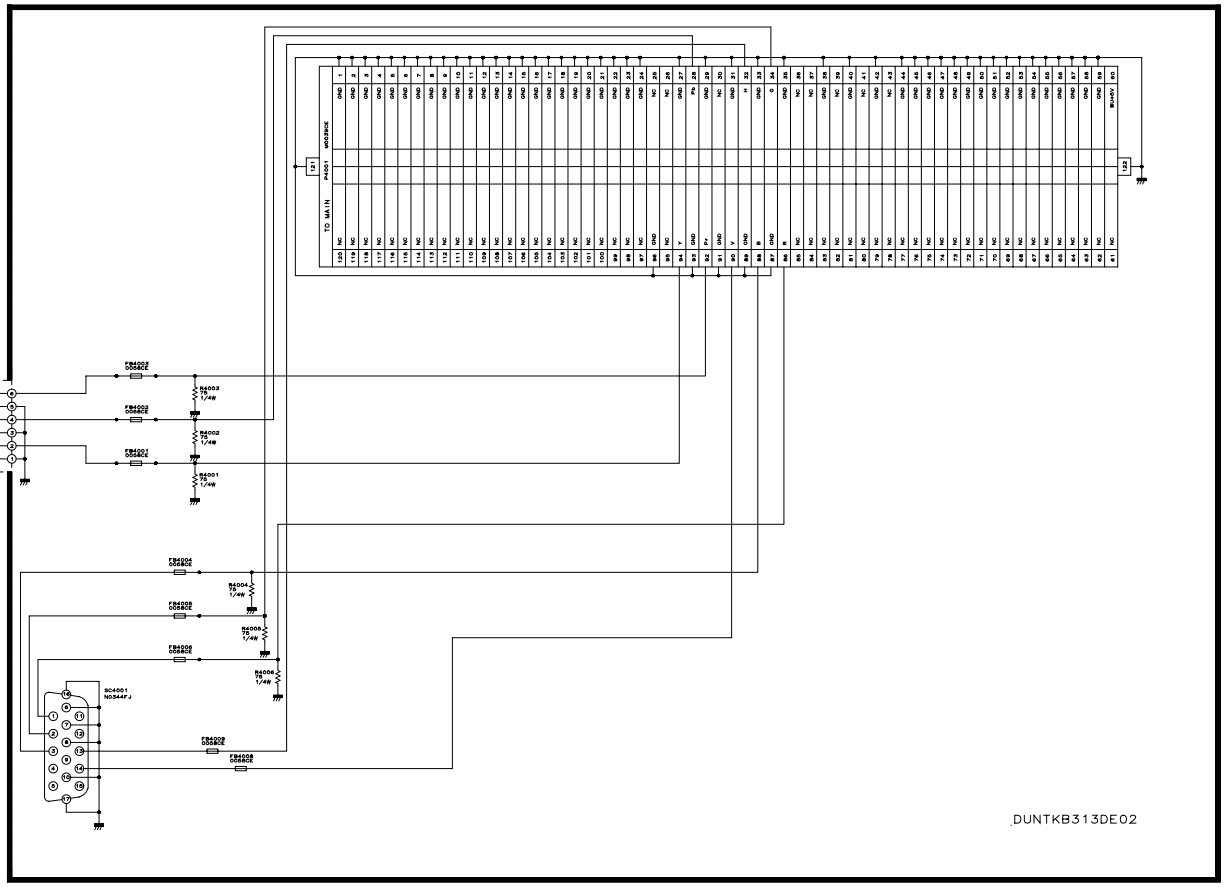
DUNTKB269DE02

10	11	12	13	14	15	16	17	18	19

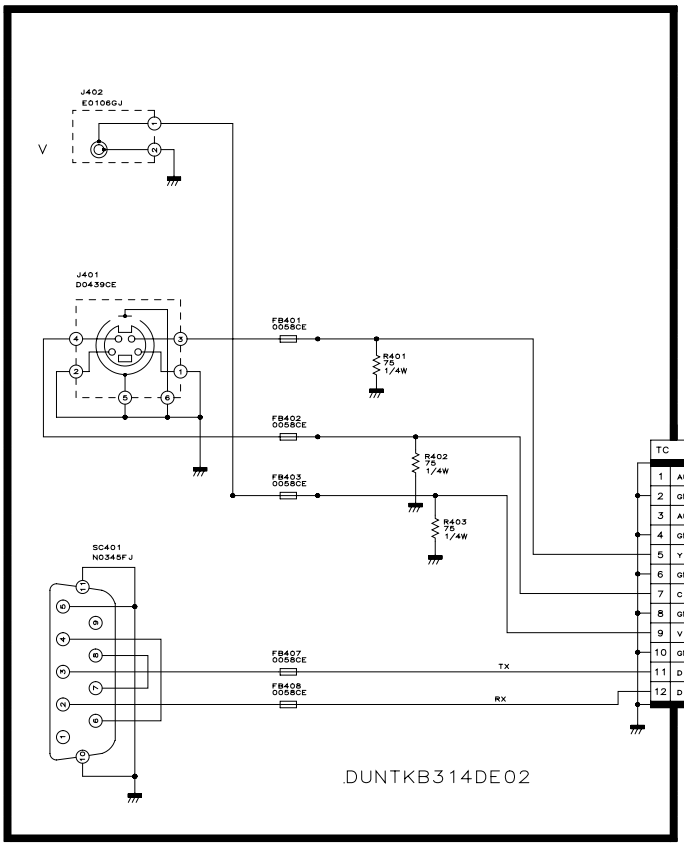
■ KEY UNIT / TASTE-EINHEIT



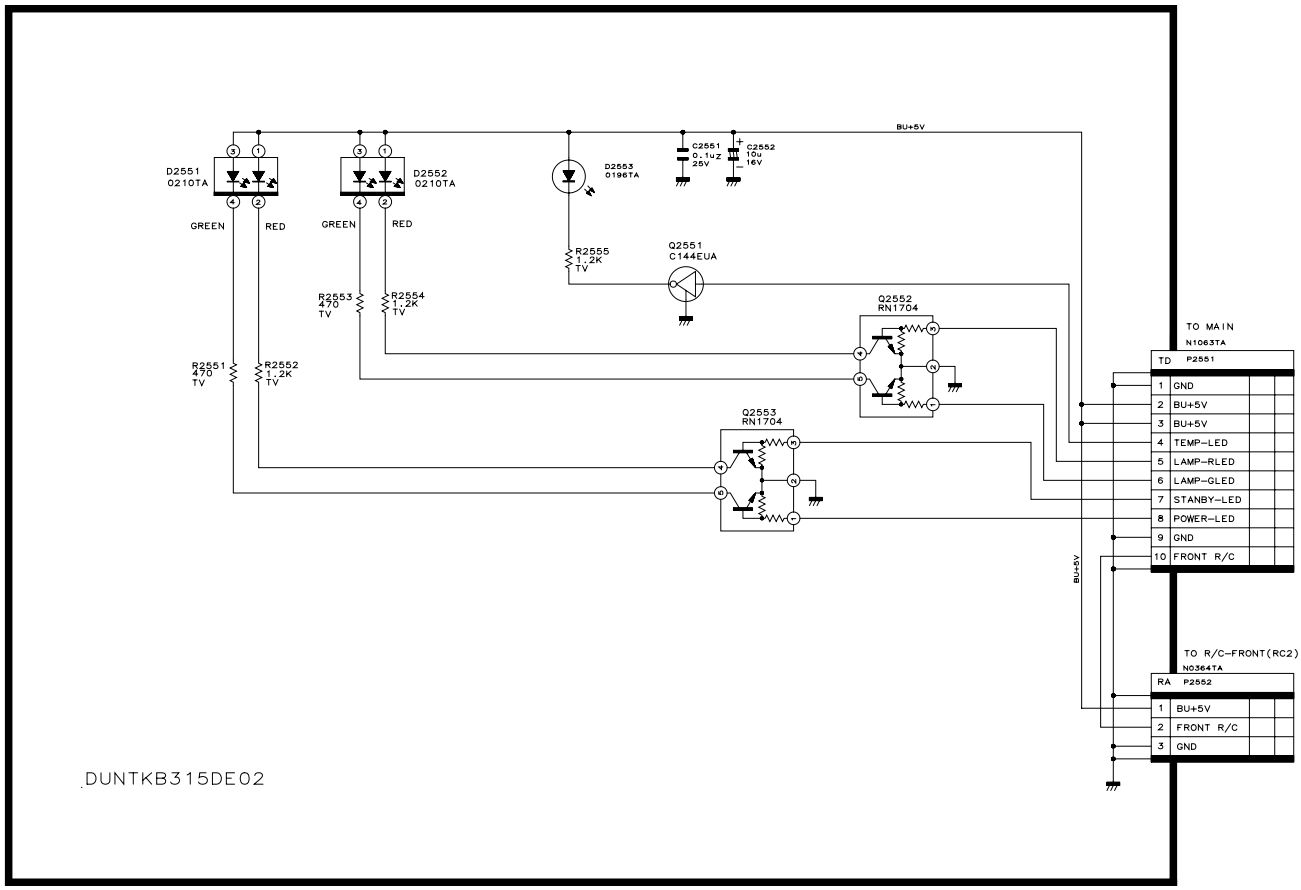
■ TERMINAL1 UNIT / TERMINAL1-EINHEIT



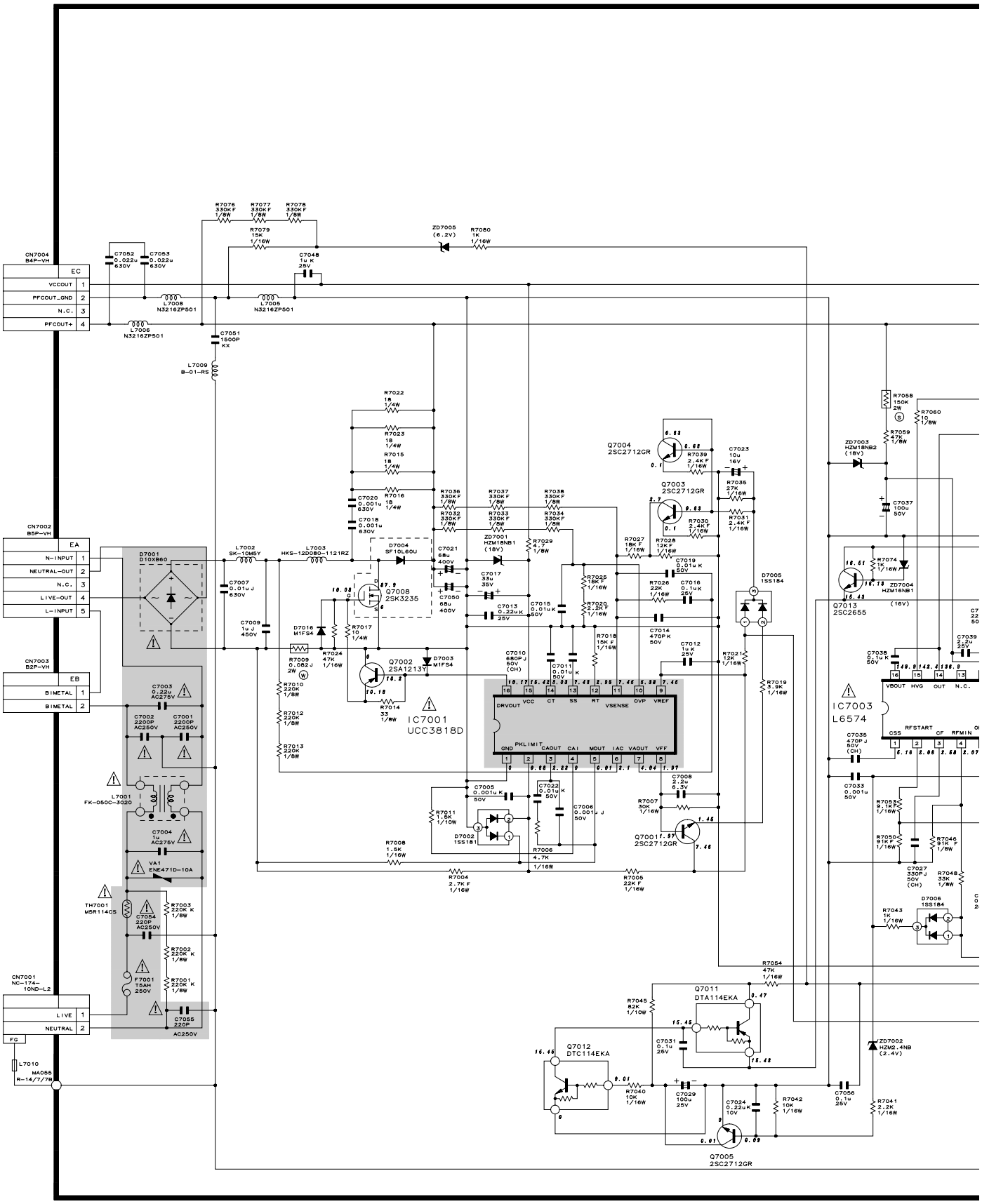
■ TERMINAL2 UNIT / TERMINAL2-EINHEIT

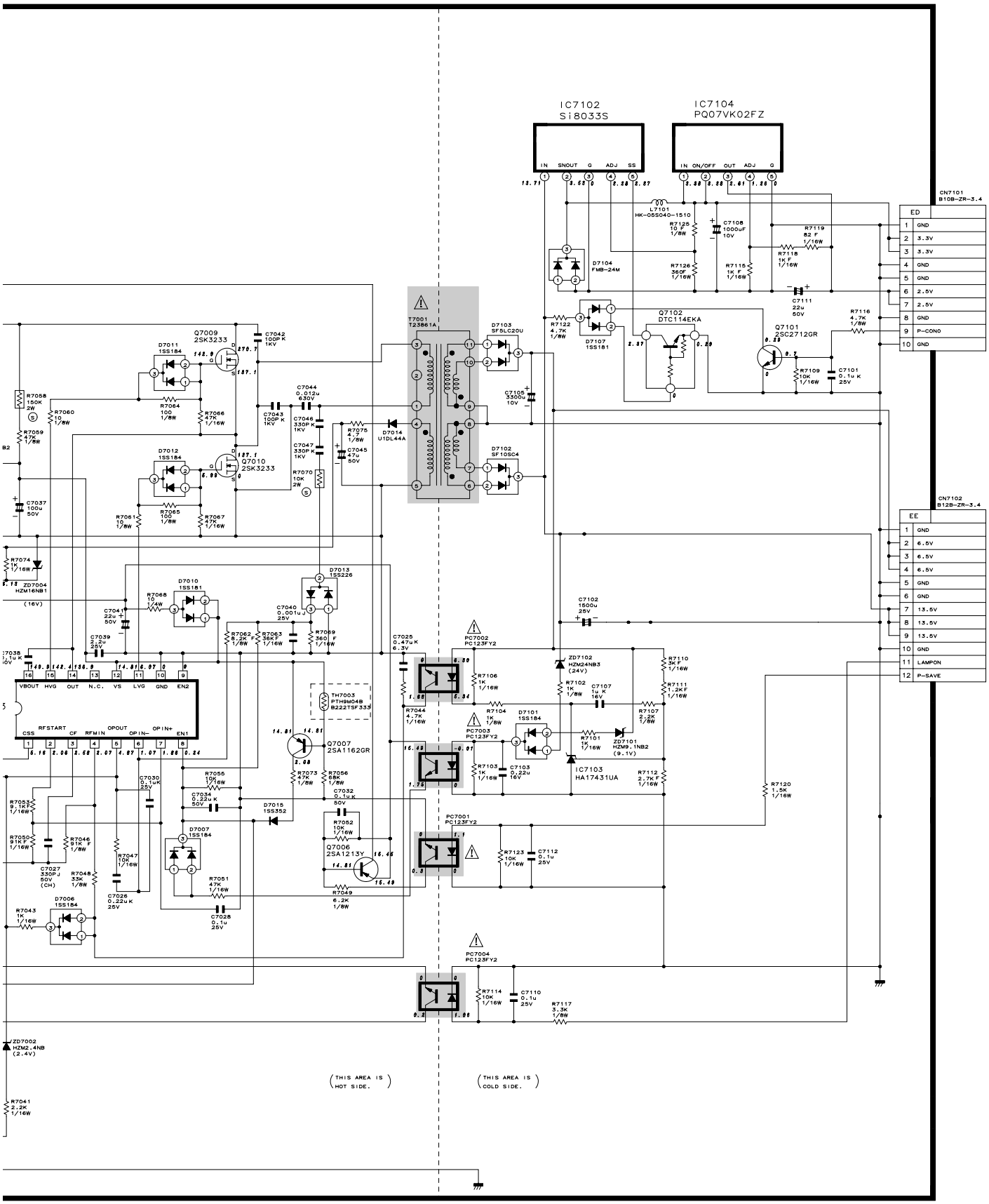


■ LED UNIT/ LED-EINHEIT



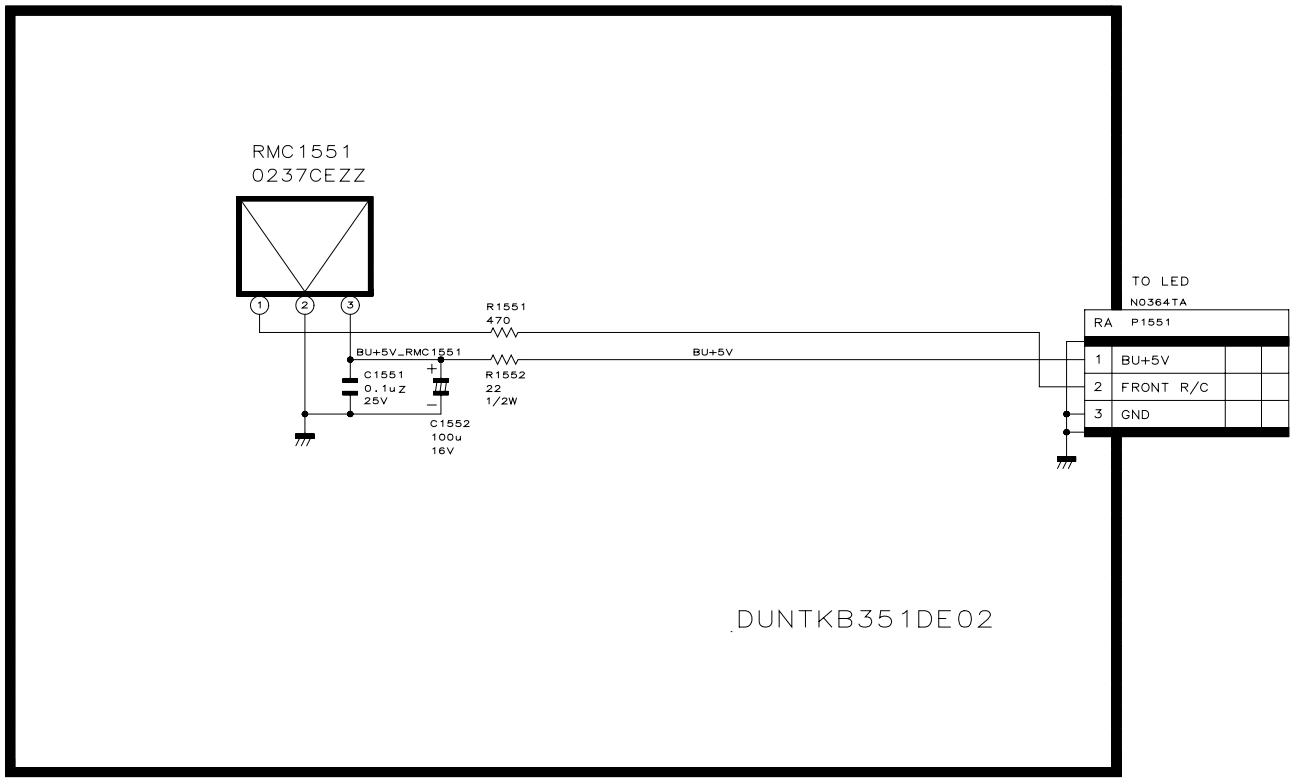
■ POWER UNIT / NETZTEINHEIT



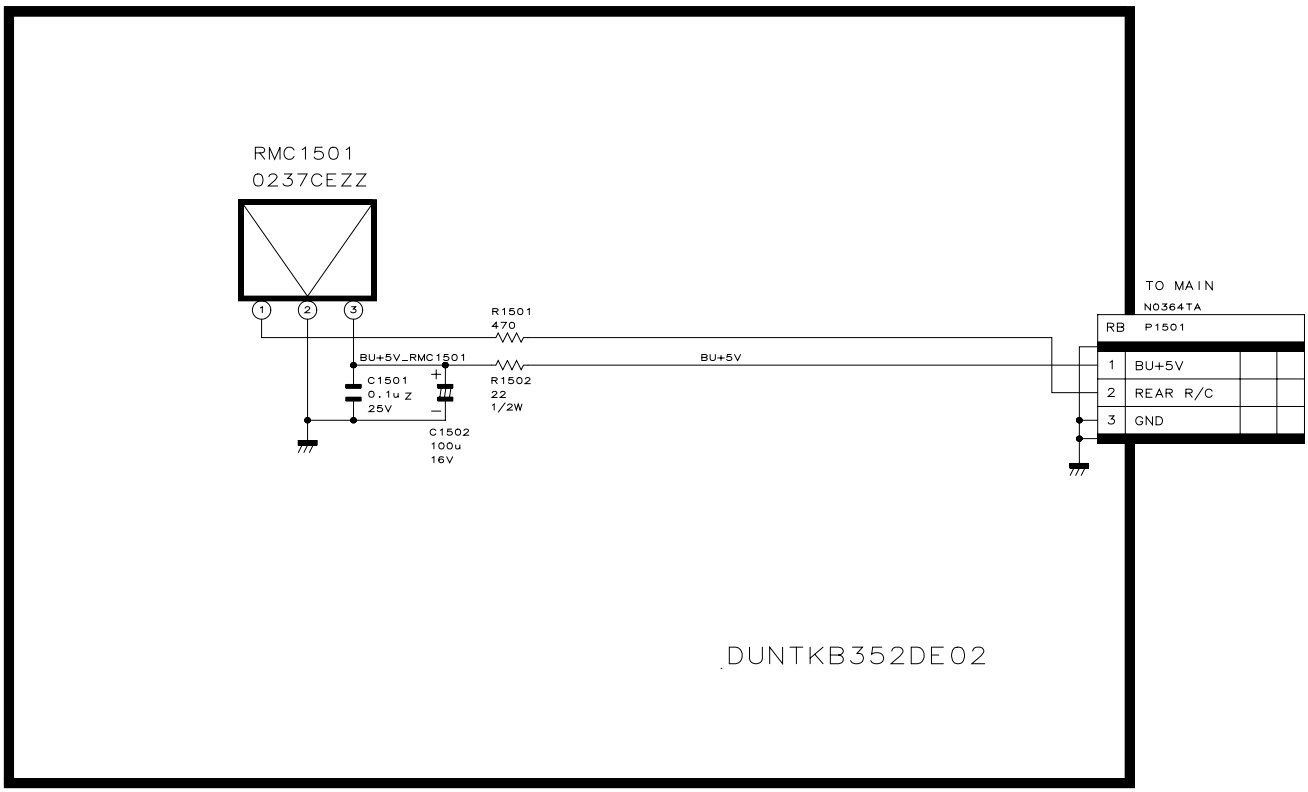


10	11	12	13	14	15	16	17	18	19

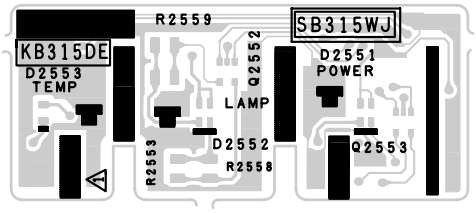
■ FRONT R/C UNIT
FORDERE-FERNBEDIENUNGSEMPFÄNGER-EINHEIT



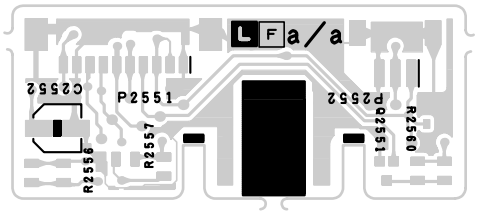
■ REAR R/C UNIT
HINTERE-FERNBEDIENUNGSEMPFÄNGER-EINHEIT



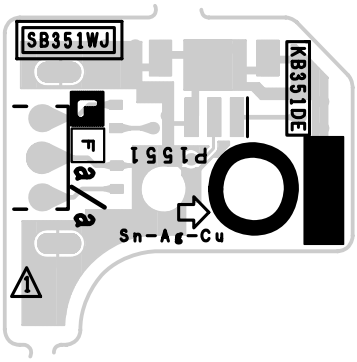
PRINTED WIRING BOARD ASSEMBLIES
LEITERPLATTENEINHEITEN



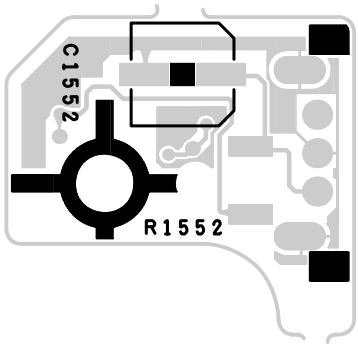
LED Unit (Side-A)
LED-Einheit (Seite-A)



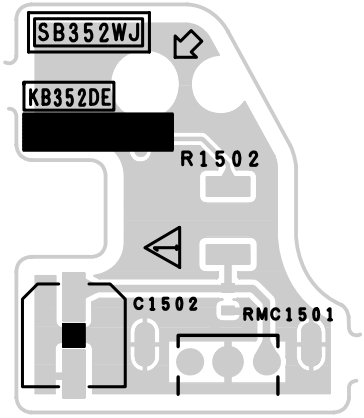
LED Unit (Side-B)
LED-Einheit (Seite-B)



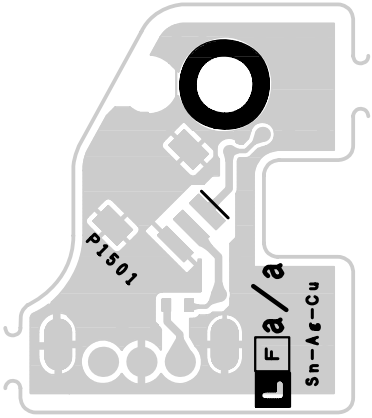
FRONT R/C Unit (Side-A)
FORDERE-FERNBEDIENUNGS-
EMPFÄNGER-Einheit (Seite-A)



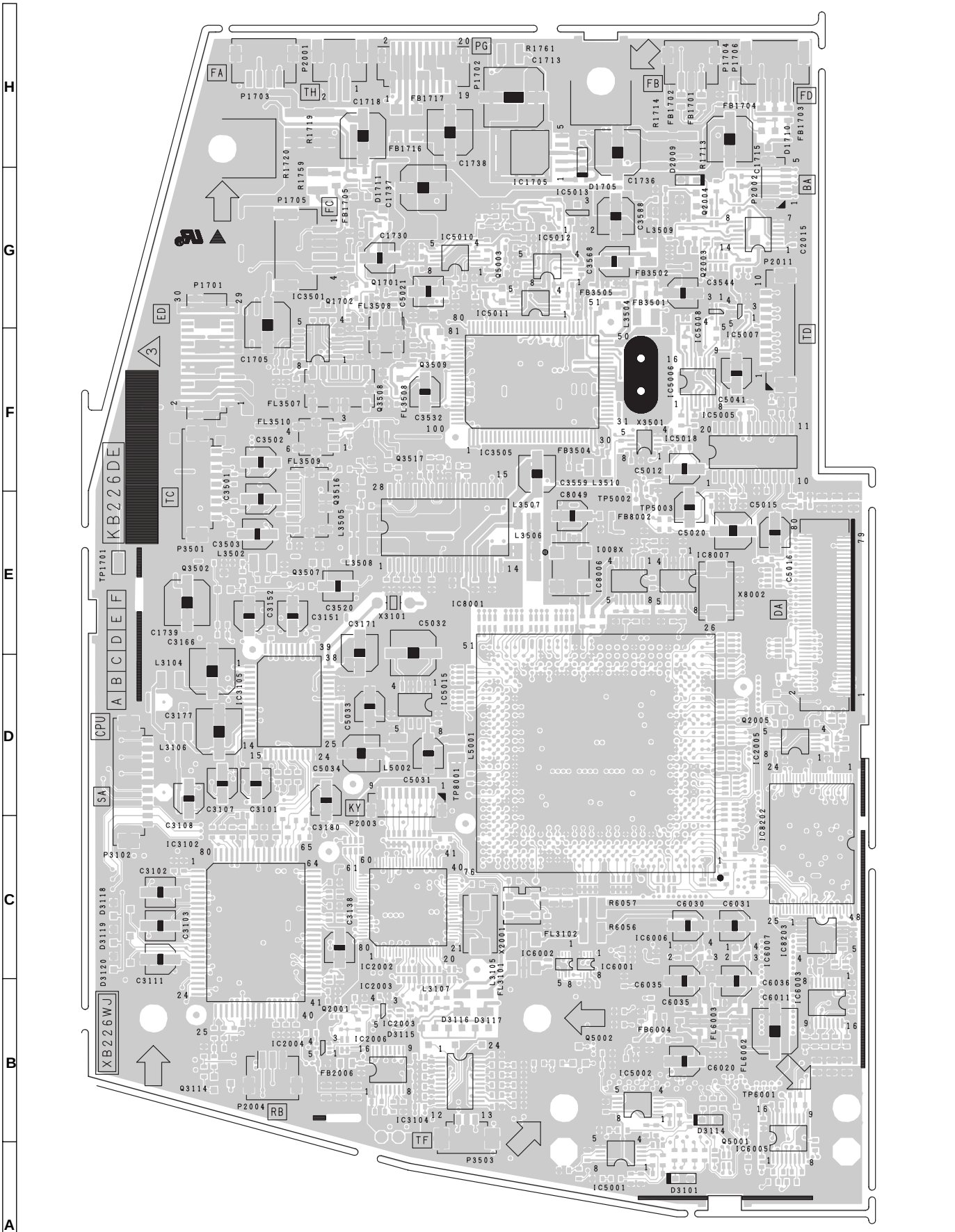
FRONT R/C Unit (Side-B)
FORDERE-FERNBEDIENUNGS-
EMPFÄNGER-Einheit (Seite-B)



REAR R/C Unit (Side-A)
HINTERE-FERNBEDIENUNGS-
EMPFÄNGER-Einheit (Seite-A)

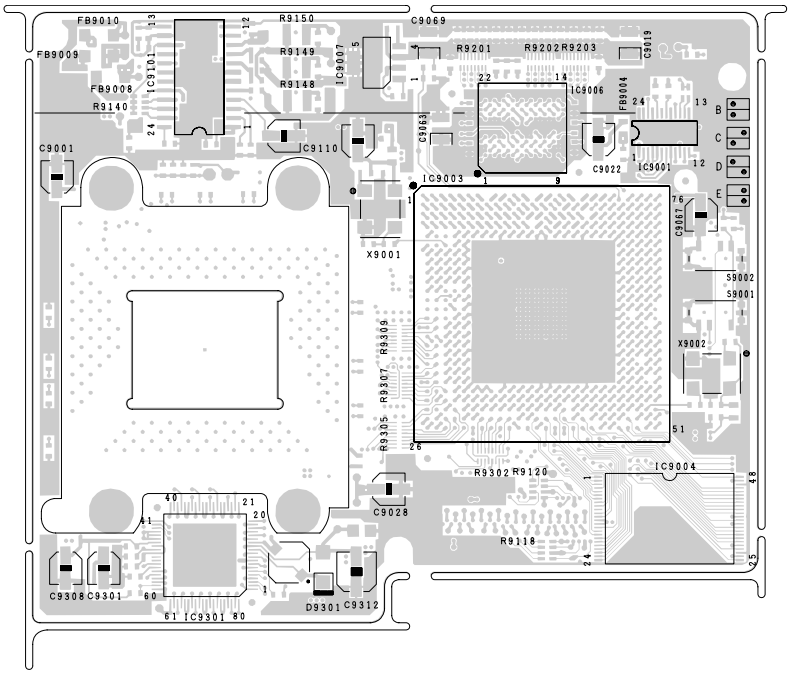


REAR R/C Unit (Side-B)
HINTERE-FERNBEDIENUNGS-
EMPFÄNGER-Einheit (Seite-B)

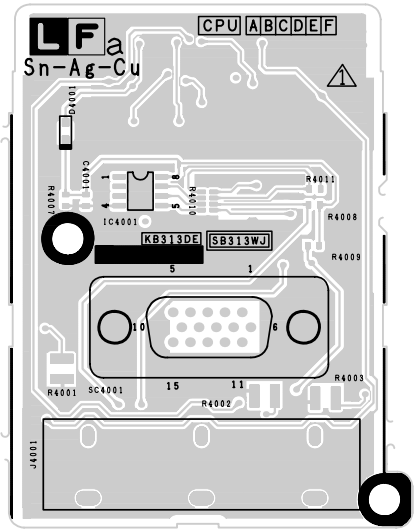


MAIN Unit (Side-A)
HAUPT-Einheit (Seite-A)

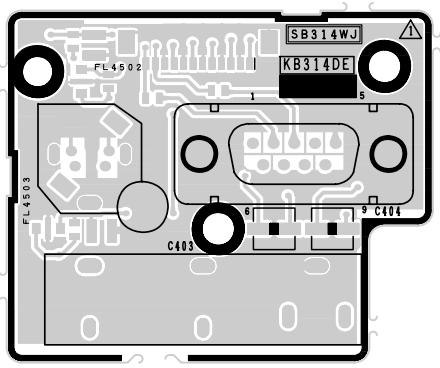
MAIN Unit (Side-B)
HAUPT-Einheit (Seite-B)



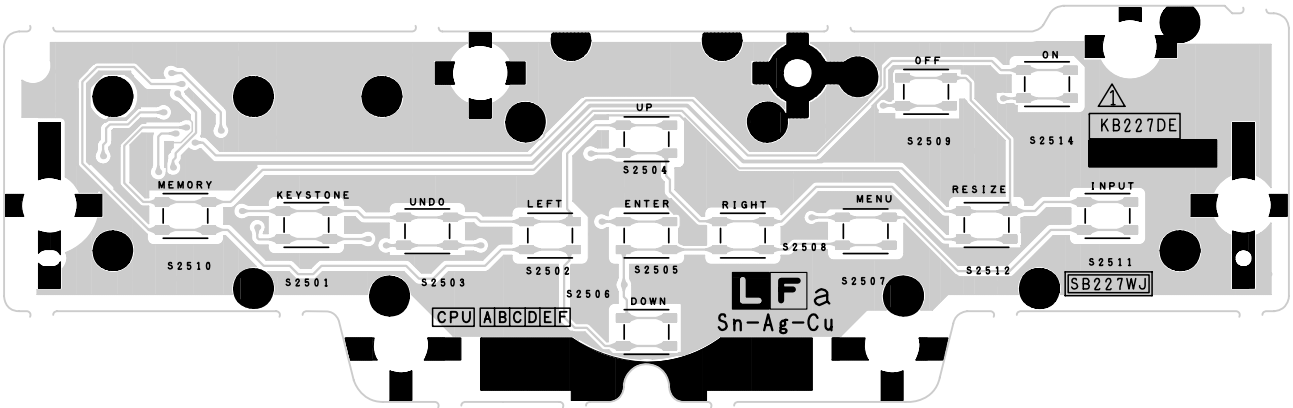
FORMATTER Unit (Side-A) / FORMATTER-Einheit (Seite-A)



TERMINAL 1 Unit (Side-A)
TERMINAL 1 Unit-Einheit (Seite-A)

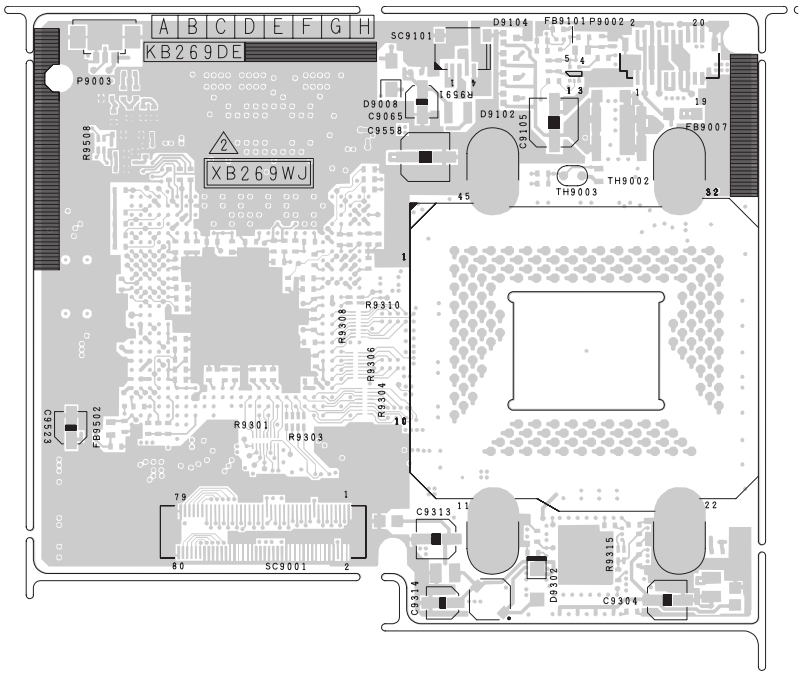


TERMINAL 2 Unit (Side-A)
TERMINAL 2 Unit-Einheit (Seite-A)

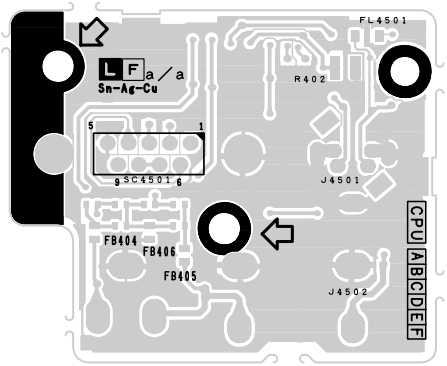


KEY Unit (Side-A)
TASTE-Einheit (Seite-A)

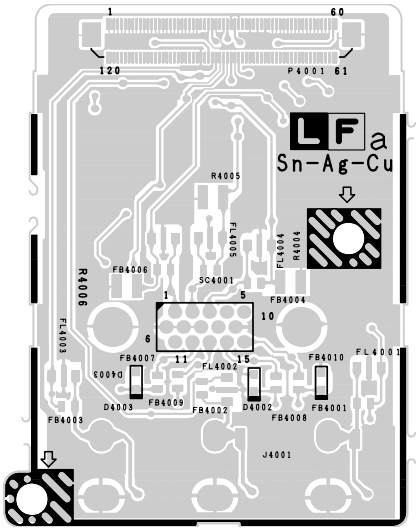
1	2	3	4	5	6



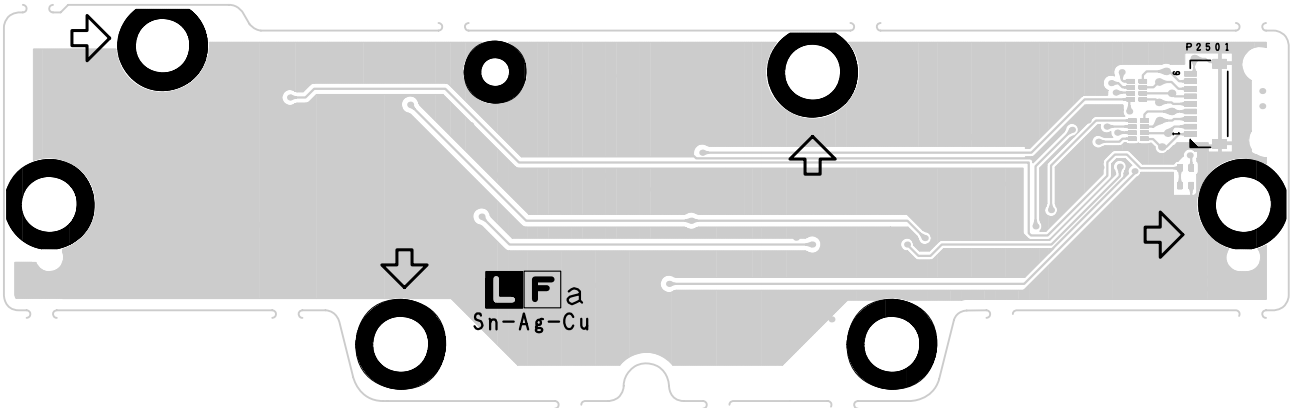
FORMATTER Unit (Side-B) / FORMATTER-Einheit (Seite-B)



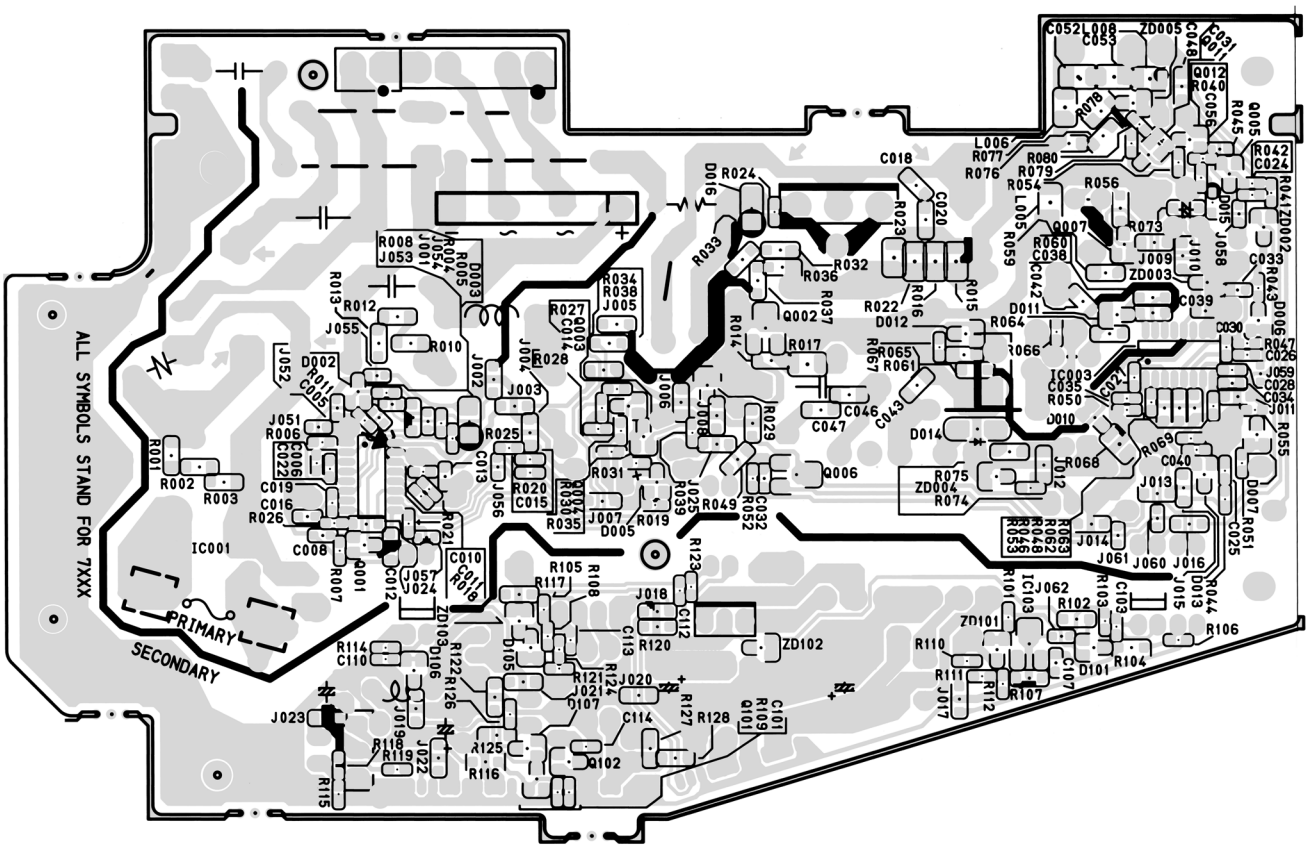
TERMINAL 2 Unit (Side-B)
TERMINAL 2-Einheit (Seite-B)



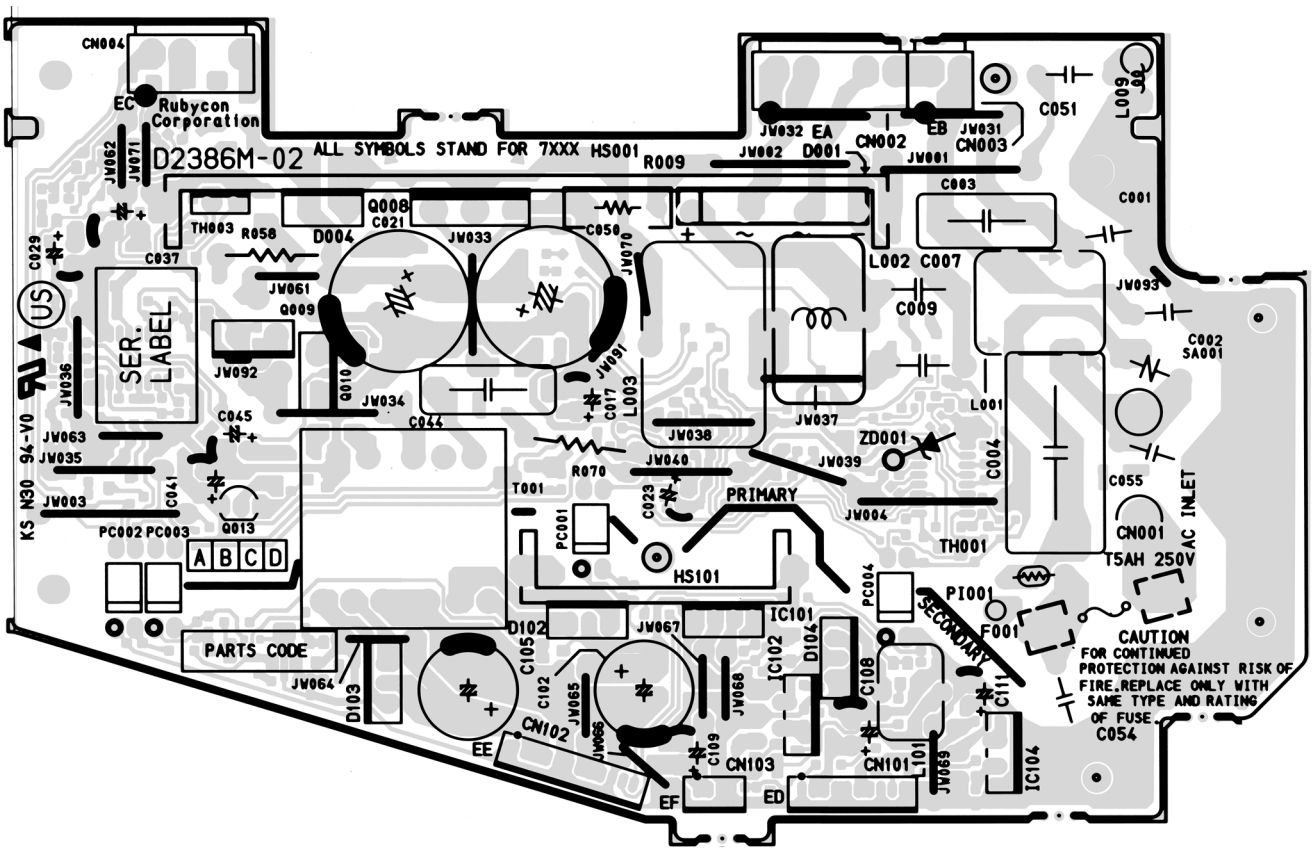
TERMINAL 1 Unit (Side-B)
TERMINAL 1-Einheit (Seite-B)



KEY Unit (Side-B)
TASTE-Einheit (Seite-B)



POWER Unit (Side-A) / Netzteineinheit (Seite-A)



POWER Unit (Side-B) / Netzteineinheit (Seite-B)

PARTS LIST

PARTS REPLACEMENT

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION
5. CODE
6. QUANTITY

ERSATZTEILLISTE

AUSTAUSCH VON TEILEN

Ersatzteile, die besondere Sicherheitseigenschften haben, sind in dieser Anleitung markiert. Elektrische Komponenten mit solchen Eigenshaften sind in den Ersatzteil durch "⚠" gekenn-zeichnet.
Der Gebrauch von Ersatzteilen, die nicht deselben Sicherheits-eigenschaften haben wie die vom Hersteller empfohlenen ud in der Bedienungsanleitung angegebenen, können zur Ursache von Blitzeinschlägen, Bränden und anderen Gefahren werden.

"WIE MAN ERSATSTEILE BESTELLT"

Damit Ihre Bestellung promt und korrekt ausgeführt wird, geben Sie bitte folgende Informationen.

1. MODELL NR.
2. REF. NR.
3. ERSATZTEIL NR.
4. BESCHREIBUNG
5. KODE
6. QUANTITÄT

★ MARK: SPARE PARTS-DELIVERY SECTION

★ MARKIERUNG : ERSATZTEILE-LIEFERUNG

PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

Ref. No.	Part No.	★	Description	Code
	DUNTKB226FE04	-	MAIN Unit	—
	DUNTKB227DE02	-	KEY Unit	—
	DUNTKB269DE02	-	FORMATTER Unit	—
	DUNTKB313DE02	-	TERMINAL1 Unit	—
	DUNTKB314DE02	-	TERMINAL2 Unit	—
	DUNTKB315DE02	-	LED Unit	—
	DUNTKB351DE02	-	FRONT R/C Unit	—
	DUNTKB352DE02	-	REAR R/C Unit	—
	RDENCA018WJZZ	-	Power Unit	—
	RDENCA019WJZZ	J	BALLAST Unit (Unit Replacenet Item)	BX

DUNTKB226FE04 MAIN UNIT

INTEGRATED CIRCUITS

IC1701	VHiPQ05DZ1U-1Y	J	PQ05DZ1U	AG
IC1702	VHiPQ3DZ13U-1Y	J	PQ3DZ13U	AG
IC1703	VHiPQ025EZ5-1Y	J	PQ025EZ5MZP	AE
IC1704	VHiPQ05DZ1U-1Y	J	PQ05DZ1U	AG
IC1705	VHiPQ12DZ1U-1Y	J	PQ12DZ1U	AG
IC1706	VHiPQ09DZ1U-1Y	J	PQ09DZ1U	AG
IC1707	VHiPQ05DZ1U-1Y	J	PQ05DZ1U	AG
IC1708	VHiPQ20WZ11-1Y	J	PQ20WZ1U	AF
IC1710	VHiPQ20WZ11-1Y	J	PQ20WZ1U	AF
IC2002	VHiTE7780++-1Q	J	TE7780	AW
IC2003	VHiTC7SH08U-1Y	J	TC7SH08FU	AF
IC2005	VHiTL712CPW-1Y	J	TL712CPWR	AK
IC2006	VHiSP3220E+-1Y	J	SP3220ECY/TR	AM
IC2007	VHiAHCT08PW-1Y	J	SN74AHCT08PW	AD
IC3101	VHiSN2G04CT-1Y	J	SN74AHC2G04HDC	AE
IC3102	VHiCXA2101Q-1Q	J	CXA2101AQ-TL	BE
IC3104	VHiAD8183++-1Y	J	AD8183ARU	AW
IC3105	VHiTB1274AF1EQ	J	TB1274AF	AX
IC3501	VHiTK15420/-1Y	J	TK15420MTL	AG
IC3503	VHiNJM2233V-1Y	J	NJM2233V	AE
IC3504	VHiTK15420/-1Y	J	TK15420MTL	AG
IC3505	VHiPD64083+-1Q	J	UPD64083GF-3BA	BC
IC3506	VHiTC90A69F-1Y	J	TC90A69F	AT
IC3507	VHiPQ025EZ5-1Y	J	PQ025EZ5MZP	AE
IC5001	VHiTL712CPW-1Y	J	TL712CPWR	AK
IC5002	VHiTL712CPW-1Y	J	TL712CPWR	AK
IC5003	VHiTHC4538T-1Y	J	TC74HC4538AFT	AL
IC5004	RH-iXA202WJN2Y	J	IC	AP
IC5005	VHiM52347FP-1Y	J	M52347FP	AK
IC5006	VHiTHC4538T-1Y	J	TC74HC4538AFT	AL
IC5007	VHiTC7S00U/-1Y	J	TC7S00FU	AS
IC5008	VHiTC7S32U/-1Y	J	TC7S32FU	AE
IC5009	VHi7WH126FU-1Y	J	TC7WH126FU	AE
IC5010	VHiNJM2137V-1Y	J	NJM2137V	AF
IC5011	VHiTL712CPW-1Y	J	TL712CPWR	AK
IC5012	VHiTL712CPW-1Y	J	TL712CPWR	AK
IC5013	VHiLM4040C/-1Y	J	LM4040CIM3X4.1	AK
IC5015	VHiLM2663M+-1Y	J	LM2663MX	AS
IC5016	VHiSN1G32DC-1Y	J	SN74AHC1G32HDC	AD
IC5018	VHiSN2G74CT-1Y	J	SN74AHC2G74HDC	AE
IC6001	VHi7WH157FK-1Y	J	TC7WH157FK	AF
IC6002	VHi7WH157FK-1Y	J	TC7WH157FK	AF
IC6004	VHiAD9883A1-1Q	J	AD9883AKST-110	BD
IC6006	VHiMM3033D+-1Y	J	MM3033DURE	AC
IC6007	VHiMM3033D+-1Y	J	MM3033DURE	AC
IC6008	VHiPQ1L333M-1Y	J	PQ1L333M2SP	AC
IC8002	VHiPST600iM-1Y	J	IC-PST600IMT	AE
IC8004	VHiTC7W14U/-1Y	J	TC7W14FU	AG
IC8005	VHiTC7S32U/-1Y	J	TC7S32FU	AE
IC8202	RH-iXA442WJN1Q	J	LHFABE09	AS
IC8203	VHiBR24C64F-1Y	J	BR24C64F-E2	AL
IC8204	VHiTC7W66U/-1Y	J	TC7W66FU	AE

Note: When exchanging the following parts, it becomes unit replacement correspondence.

IC8001	————————	-	————————	—

TRANSISTORS

Q1701	VSDTC114EE/-1Y	J	DTC114EE	AB
Q1703	VS2SA1037KQ-1Y	J	2SA1037KQ	AA
Q1704	VSDTC114EE/-1Y	J	DTC114EE	AB
Q2004	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q2005	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3101	VS2SC2735//-1Y	J	2SC2735	AB
Q3102	VS2SC2735//-1Y	J	2SC2735	AB
Q3103	VS2SC2735//-1Y	J	2SC2735	AB
Q3104	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q3105	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3106	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3107	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3108	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3109	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q3111	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q3112	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q3113	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q3114	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q3502	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3504	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3505	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q3507	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3508	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3509	VS2SA1530AR-1Y	J	2SA1530AR	AB

Ref. No.	Part No.	★	Description	Code

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Q3510	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3511	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3513	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q3514	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3515	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q3516	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3517	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q3518	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q5001	VSDTC114EE/-1Y	J	DTC114EE	AB
Q5002	VS2SA1530AR-1Y	J	2SA1530AR	AB
Q5003	VS2SC3928AR-1Y	J	2SC3928AR	AB
Q8002	VSRN4904///-1Y	J	RN4904	AB
Q8003	VSHN1K03FU+-1Y	J	HN1K03FU	AD
Q8004	VSRN4904///-1Y	J	RN4904	AB
Q8005	VSRN4904///-1Y	J	RN4904	AB
Q8201	VSHN1B04FU/-1Y	J	HN1B04FU	AC

DIODES

D1701	VHDHSU119//-1Y	J	HSU119	AB
D1702	VHDHSU119//-1Y	J	HSU119	AB
D1703	VHDHSU119//-1Y	J	HSU119	AB
D1704	VHDHSU119//-1Y	J	HSU119	AB
D1705	VHDHSU119//-1Y	J	HSU119	AB
D1706	VHDHSU119//-1Y	J	HSU119	AB
D1707	VHDHSU119//-1Y	J	HSU119	AB
D1708	VHDHSU119//-1Y	J	HSU119	AB
D1710	VHDDAN202K/-1Y	J	DAN202K	AB
D1711	VHDDAN202K/-1Y	J	DAN202K	AB
D1712	VHDHSU119//-1Y	J	HSU119	AB
D2002	RH-EX1247CEZZY	J	Zener Diode	AB
D2005	RH-EX1271CEZZY	J	Zener Diode	AB
D2006	RH-EX1271CEZZY	J	Zener Diode	AB
D2007	RH-EX1271CEZZY	J	Zener Diode	AB
D2008	RH-EX1271CEZZY	J	Zener Diode	AB
D2009	RH-EX1244CEZZY	J	Zener Diode	AB
D3101	RH-EX1247CEZZY	J	Zener Diode	AB
D3105	VHDKDS226//-1Y	J	KDS226	AB
D3106	VHDKDS226//-1Y	J	KDS226	AB
D3107	VHDKDS226//-1Y	J	KDS226	AB
D3108	VHDKDS226//-1Y	J	KDS226	AB
D3109	VHDKDS226//-1Y	J	KDS226	AB
D3110	VHDKDS226//-1Y	J	KDS226	AB
D3114	RH-EX1247CEZZY	J	Zener Diode	AB
D3115	VHDKDS226//-1Y	J	KDS226	AB
D3116	VHDKDS226//-1Y	J	KDS226	AB
D3117	VHDKDS226//-1Y	J	KDS226	AB
D3501	RH-EX1262CEZZY	J	Zener Diode	AB
D3502	RH-EX1262CEZZY	J	Zener Diode	AB
D3503	RH-EX1262CEZZY	J	Zener Diode	AB
D3504	VHDHSU119//-1Y	J	HSU119	AB

PACKAGED CIRCUIT

X2001	RCRSC0141TAZZY	J	Crystal	AG
X3101	RCRSAA025WJZZ	J	Crystal	AF
X3501	RCRSB0258CEZZ	J	Crystal	AG
X8001	RCRUAA012WJZZY	J	Crystal	AL
X8003	RCRUAA013WJZZY	J	Crystal	AP

COILS AND FILTERS

FL3101	RFiLNA006WJZZY	J	Filter	AD
FL3102	RFiLNA006WJZZY	J	Filter	AD
FL3103	RFiLNA006WJZZY	J	Filter	AD
FL3104	RFiLNA006WJZZY	J	Filter	AD
FL3507	RCiLF0306CEZZY	J	Coil	AH
FL3508	RCiLV0108GEZZY	J	Band-Pass Coil	AG
FL3509	RCiLF0306CEZZY	J	Coil	AH
FL3510	RCiLFA034WJZZY	J	Coil	AE
FL6001	RFiLN0130CEZZY	J	Filter	AD
FL6002	RFiLN0130CEZZY	J	Filter	AD
FL6003	RFiLN0130CEZZY	J	Filter	AD
FL8001	RFiLN0003TAZZY	J	Filter	AD
FL8002	RFiLN0003TAZZY	J	Filter	AD
L3104	VPCKM4R7JR88NY	J	Peaking 4.7µH	AB
L3105	VPCKM680J6R2NY	J	Peaking 68µH	AB
L3106	VPCKM4R7JR88NY	J	Peaking 4.7µH	AB
L3107	VPCKM680J6R2NY	J	Peaking 68µH	AB
L3502	VPCKM220J2R1NY	J	Peaking 22µH	AB
L3503	VPCKM220J2R1NY	J	Peaking 22µH	AB
L3504	VPCKM5R6JR94NY	J	Peaking 5.6µH	AB
L3505	VPCKM101J6R0NY	J	Peaking 100µH	AB
L3506	VPCKM101J6R0NY	J	Peaking 100µH	AB
L3507	VPCKM4R7JR88NY	J	Peaking 4.7µH	AB
L3508	VPCKM220J2R1NY	J	Peaking 22µH	AB
L3509	VPCKM100J1R3NY	J	Peaking 10µH	AB
L3510	VPCKM100J1R3NY	J	Peaking 10µH	AB
L5001	VPCKM100J1R3NY	J	Peaking 10µH	AB
L5002	VPCKM100J1R3NY	J	Peaking 10µH	AB

CAPACITORS

C1701	VCEAPF1CW336MY	J	33	16V	Electrolytic	AD
C1702	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1703	VCEAPF1CW107MY	J	100	16V	Electrolytic	AC
C1704	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1705	VCEAPF1CW107MY	J	100	16V	Electrolytic	AC
C1706	VCEAPF1CW336MY	J	33	16V	Electrolytic	AD
C1707	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1708	VCEAPF1CW107MY	J	100	16V	Electrolytic	AC
C1709	VCEAPF1CW476MY	J	47	16V	Electrolytic	AC
C1710	VCEAPF1CW336MY	J	33	16V	Electrolytic	AD
C1711	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1712	VCEAPF1CW107MY	J	100	16V	Electrolytic	AC
C1713	VCAAPD1CJ826MY	J	82	16V	Electrolytic	AF
C1714	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1715	VCEAPX1CW227MY	J	220	16V	Electrolytic	AD
C1716	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1718	VCEAPF1EW336MY	J	33	25V	Electrolytic	AD
C1719	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1720	VCEAPF1EW226MY	J	22	25V	Electrolytic	AD
C1721	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1722	VCEAPF1CW107MY	J	100	16V	Electrolytic	AC
C1723	VCAAPD0JJ127MY	J	120	6.3V	Electrolytic	AF
C1724	VCEAPF1EW336MY	J	33	25V	Electrolytic	AD
C1725	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1726	VCEAPF1EW226MY	J	22	25V	Electrolytic	AD
C1730	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C1732	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1733	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1734	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1735	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1737	VCEAPF0JW107MY	J	100	6.3V	Electrolytic	AC
C1738	VCEAPF0JW107MY	J	100	6.3V	Electrolytic	AC
C1739	VCEAPF1CW336MY	J	33	16V	Electrolytic	AD
C1740	VCEAPF1EW336MY	J	33	25V	Electrolytic	AD
C2001	VCKYCY1HF103ZY	J	0.01	50V	Ceramic	AA
C2005	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2006	VCKYCY1HF103ZY	J	0.01	50V	Ceramic	AA
C2007	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C2008	VCCCCY1HH220JY	J	22p	50V	Ceramic	AA
C2009	VCCCCY1HH220JY	J	22p	50V	Ceramic	AA
C2011	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2012	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2013	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2014	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2015	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2016	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2017	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2018	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2019	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2020	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2023	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3101	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C3102	VCE9PF1HW105MY	J	1	50V	Elect.(N,P)	AC
C3103	VCE9PF1HW105MY	J	1	50V	Elect.(N,P)	AC
C3104	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C3105	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C3106	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C3107	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C3108	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C3109	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3110	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3111	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C3112	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA

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Ref. No.	Part No.	★			Description	Code
C3113	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3114	VCEAPF1CW476MY	J	47	16V	Electrolytic	AC
C3115	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3116	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3117	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3118	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3119	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3120	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3121	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3122	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3123	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3124	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3125	VCCCCY1HH121JY	J	120p	50V	Ceramic	AA
C3126	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3127	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3131	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3132	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3133	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3134	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3135	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3136	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3137	VCKYCY1CF474ZY	J	0.47	16V	Ceramic	AB
C3138	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3139	VCKYCY1CF474ZY	J	0.47	16V	Ceramic	AB
C3140	VCKYCY1CF474ZY	J	0.47	16V	Ceramic	AB
C3143	VCKYCY1HB222KY	J	2200p	50V	Ceramic	AA
C3144	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3145	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3146	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3147	VCKYCY1HF103ZY	J	0.01	50V	Ceramic	AA
C3148	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3149	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C3150	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3151	VCEAPF1HW474MY	J	0.47	50V	Electrolytic	AC
C3152	VCEAPF1HW225MY	J	2.2	50V	Electrolytic	AB
C3153	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3154	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3155	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C3156	VCKYCY1HB222KY	J	2200p	50V	Ceramic	AA
C3157	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3158	VCCCCY1HH7R0DY	J	7.0p	50V	Ceramic	AA
C3159	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3160	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3161	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3162	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3163	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3166	VCEAPF0JW107MY	J	100	6.3V	Electrolytic	AC
C3167	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3168	VCE9PF1CW106MY	J	10	16V	Elect.(N,P)	AC
C3169	VCKYCY1HF103ZY	J	0.01	50V	Ceramic	AA
C3171	VCEAPF0JW476MY	J	47	6.3V	Electrolytic	AB
C3173	VCE9PF1CW106MY	J	10	16V	Elect.(N,P)	AC
C3175	VCE9PF1CW106MY	J	10	16V	Elect.(N,P)	AC
C3176	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3177	VCAAPD0JJ127MY	J	120	6.3V	Electrolytic	AF
C3178	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C3179	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C3180	VCEAPF1EW475MY	J	4.7	25V	Electrolytic	AB
C3181	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3182	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3183	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3188	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3189	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3191	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3192	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3193	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3194	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3195	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3196	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3197	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3198	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3199	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3200	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3201	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3202	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3203	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3204	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3501	VCE9PF1AW106MY	J	10	10V	Elect.(N,P)	AE
C3502	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3503	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3506	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3507	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3512	VCCCCY1HH100DY	J	10p	50V	Ceramic	AA
C3513	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C3515	VCCCCY1HH120JY	J	12p	50V	Ceramic	AA
C3516	VCCCCY1HH270JY	J	27p	50V	Ceramic	AA
C3517	VCCCCY1HH100DY	J	10p	50V	Ceramic	AA
C3519	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3520	VCE9PF1HW105MY	J	1	50V	Elect.(N,P)	AC
C3521	VCCCCY1HH120JY	J	12p	50V	Ceramic	AA
C3523	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3524	VCCCCY1HH270JY	J	27p	50V	Ceramic	AA
C3525	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3526	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3527	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3528	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3529	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3530	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3531	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3532	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C3533	VCKYTV1CF105ZY	J	1	16V	Ceramic	AB
C3534	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3535	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3536	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3537	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3538	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3539	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3540	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3541	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3542	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3543	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3544	VCEAPF0GW476MY	J	47	4.0V	Electrolytic	AB
C3545	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3546	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3547	VCEAPF0GW476MY	J	47	4.0V	Electrolytic	AB
C3548	VCEAPF0GW476MY	J	47	4.0V	Electrolytic	AB
C3549	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3550	VCCCCY1HH471JY	J	470p	50V	Ceramic	AA
C3551	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C3553	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3554	VCEAPF1HW474MY	J	0.47	50V	Electrolytic	AC
C3555	VCEAPF0JW476MY	J	47	6.3V	Electrolytic	AB
C3556	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3557	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3558	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3559	VCEAPF0JW476MY	J	47	6.3V	Electrolytic	AB
C3560	VCKYCY1HF103ZY	J	0.01	50V	Ceramic	AA
C3561	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3562	VCEAPF0JW476MY	J	47	6.3V	Electrolytic	AB
C3563	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3564	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3565	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3566	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3567	VCCCCY1EH681JY	J	680p	25V	Ceramic	AA
C3568	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C3569	VCCCCY1HH220JY	J	22p	50V	Ceramic	AA
C3570	VCCCCY1HH270JY	J	27p	50V	Ceramic	AA
C3571	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C3572	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3573	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C3574	VCEAPF0JW476MY	J	47	6.3V	Electrolytic	AB
C3575	VCKYCY1EB473KY	J	0.047	25V	Ceramic	AA
C3576	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C3577	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3578	VCCCCY1HH561JY	J	560p	50V	Ceramic	AB
C3579	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C3580	VCCCCY1HH821JY	J	820p	50V	Ceramic	AB
C3581	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C3582	VCKYCY1HB103KY	J	0.01	50V	Ceramic	AA
C3586	VCEAPF1CW107MY	J	100	16V	Electrolytic	AC
C3587	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA

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Ref. No.	Part No.	★			Description	Code
C3588	VCEAPF0JW476MY	J	47	6.3V	Electrolytic	AB
C3589	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3590	VCAAPD0GJ686MY	J	68	4.0V	Electrolytic	AD
C3591	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C3592	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C5001	VCCCCY1HH330JY	J	33p	50V	Ceramic	AA
C5002	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5003	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5004	VCCCCY1HH330JY	J	33p	50V	Ceramic	AA
C5005	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5006	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5007	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5008	VCCCCY1HH330JY	J	33p	50V	Ceramic	AA
C5009	VCCCCY1HH821JY	J	820p	50V	Ceramic	AB
C5010	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5011	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5012	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C5014	VCKYCY1CB683KY	J	0.068	16V	Ceramic	AC
C5015	VCEAPF1HW475MY	J	4.7	50V	Electrolytic	AC
C5016	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C5017	VCFRED1HM152JY	J	1500p	50V	Mylar	AC
C5018	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C5019	VCCCCY1HH821JY	J	820p	50V	Ceramic	AB
C5020	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C5021	VCE9PF1HW474MY	J	0.47	50V	Elect.(N,P)	AD
C5022	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5023	VCKYCY1HB222KY	J	2200p	50V	Ceramic	AA
C5024	VCCCCY1HH101JY	J	100p	50V	Ceramic	AA
C5025	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5026	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5027	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5028	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5030	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5031	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C5032	VCEAPF1CW476MY	J	47	16V	Electrolytic	AC
C5033	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C5034	VCAAPC0JJ476MY	J	47	6.3V	Electrolytic	AE
C5035	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5036	VCCCCY1HH221JY	J	220p	50V	Ceramic	AA
C5037	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5038	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C5039	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5040	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5041	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C5042	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5043	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5044	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C5048	VCCCCY1HH100DY	J	10p	50V	Ceramic	AA
C5049	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6003	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6006	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C6007	VCKYCY1EB473KY	J	0.047	25V	Ceramic	AA
C6008	VCKYCY1EB473KY	J	0.047	25V	Ceramic	AA
C6009	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C6010	VCKYCY1EB473KY	J	0.047	25V	Ceramic	AA
C6011	VCAAPF1AJ566MY	J	56	10V	Electrolytic	AD
C6012	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6013	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6014	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6015	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6016	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6017	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6018	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6019	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6020	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C6021	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6022	VCKYCY1EB822KY	J	8200p	25V	Ceramic	AA
C6023	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6024	VCKYCY1CB823KY	J	0.082	16V	Ceramic	AH
C6025	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6026	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6027	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6028	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6030	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C6031	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C6032	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C6033	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C6034	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C6035	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C6036	VCEAPF0JW226MY	J	22	6.3V	Electrolytic	AB
C8001	VCAAPC1CJ396MY	J	39	16V	Electrolytic	AG
C8003	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8004	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8005	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8006	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8007	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8008	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8009	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8010	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8011	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8012	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8013	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8014	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8015	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8016	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8017	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8018	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8019	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8020	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8021	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8022	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8023	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8024	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8025	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8027	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8029	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8030	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8032	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8034	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8035	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8036	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8037	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8038	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8039	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8040	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8041	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8046	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8047	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8048	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8051	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8052	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8055	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8056	VCAAPC0JJ476MY	J	47	6.3V	Electrolytic	AE
C8057	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8058	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8202	VCKYCY1EB223KY	J	0.022	25V	Ceramic	AA
C8203	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8204	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C8205	VCCCCY1HH470JY	J	47p	50V	Ceramic	AA
C8206	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA

RESISTORS

R1701	VRS-TX2HF1R0JY	J	1	1/2W	Metal Oxide	AB
R1702	VRS-TX2HF1R0JY	J	1	1/2W	Metal Oxide	AB
R1703	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R1704	VRS-TX2HF3R3JY	J	3.3	1/2W	Metal Oxide	AB
R1705	VRS-TX2HF3R3JY	J	3.3	1/2W	Metal Oxide	AB
R1706	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R1707	VRS-TX2HF1R5JY	J	1.5	1/2W	Metal Oxide	AB
R1708	VRS-TX2HF1R5JY	J	1.5	1/2W	Metal Oxide	AB
R1709	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R1710	VRS-TX2HF1R5JY	J	1.5	1/2W	Metal Oxide	AB
R1711	VRS-TX2HF1R5JY	J	1.5	1/2W	Metal Oxide	AB
R1712	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R1713	VRS-TX2HF1R0JY	J	1	1/2W	Metal Oxide	AB
R1714	VRS-TX2HF1R0JY	J	1	1/2W	Metal Oxide	AB
R1715	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R1716	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R1719	VRS-TX2HF2R2JY	J	2.2	1/2W	Metal Oxide	AB
R1720	VRS-TX2HF2R2JY	J	2.2	1/2W	Metal Oxide	AB
R1721	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA

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MAIN UNIT (Continued)

Ref. No.	Part No.	★			Description	Code
R1722	VRN-CY1JF333DY	J	33k	1/16W	0. Metal Film	AA
R1723	VRN-CY1JF272DY	J	2.7k	1/16W	0. Metal Film	AA
R1724	VRN-CY1JF103DY	J	10k	1/16W	0. Metal Film	AA
R1725	VRS-TX2HF1R0JY	J	1	1/2W	Metal Oxide	AB
R1726	VRS-TX2HF1R0JY	J	1	1/2W	Metal Oxide	AB
R1727	VRS-TX2HF150JY	J	15	1/2W	Metal Oxide	AB
R1728	VRS-TX2HF150JY	J	15	1/2W	Metal Oxide	AB
R1731	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R1732	VRS-TX2HF2R2JY	J	2.2	1/2W	Metal Oxide	AB
R1733	VRS-TX2HF2R2JY	J	2.2	1/2W	Metal Oxide	AB
R1734	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R1735	VRN-CY1JF333DY	J	33k	1/16W	0. Metal Film	AA
R1736	VRN-CY1JF272DY	J	2.7k	1/16W	0. Metal Film	AA
R1737	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R1738	VRN-CY1JF134DY	J	130k	1/16W	0. Metal Film	AA
R1739	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R1740	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R1741	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R1742	VRS-CA1JF472JY	J	4.7k	1/16W	Metal Oxide	AA
R1745	VRS-CA1JF472JY	J	4.7k	1/16W	Metal Oxide	AA
R1746	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R1747	VRS-CY1JF682JY	J	6.8k	1/16W	Metal Oxide	AA
R1748	VRS-CY1JF562JY	J	5.6k	1/16W	Metal Oxide	AA
R1751	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R1752	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R1753	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R1754	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R1759	VRS-TW2ED240JY	J	24	1/4W	Metal Oxide	AA
R1761	VRS-TW2ED430JY	J	43	1/4W	Metal Oxide	AA
R1763	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R1768	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R1797	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R1798	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R1799	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R2001	VRS-CY1JF103FY	J	10k	1/16W	Metal Oxide	AA
R2004	VRS-CY1JF183FY	J	18k	1/16W	Metal Oxide	AA
R2007	VRS-CB1JF102JY	J	1k	1/16W	Metal Oxide	AA
R2008	VRS-CB1JF100JY	J	10	1/16W	Metal Oxide	AA
R2010	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R2011	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R2012	VRS-CA1JF100JY	J	10	1/16W	Metal Oxide	AA
R2015	VRS-CB1JF100JY	J	10	1/16W	Metal Oxide	AA
R2017	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R2018	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R2019	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R2021	VRS-CB1JF102JY	J	1k	1/16W	Metal Oxide	AA
R2022	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R2023	VRS-CB1JF103JY	J	10k	1/16W	Metal Oxide	AA
R2025	VRS-CB1JF100JY	J	10	1/16W	Metal Oxide	AA
R2026	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R2028	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R2029	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R2030	VRS-CA1JF000JY	J	0	1/16W	Metal Oxide	AB
R2031	VRS-CY1JF105JY	J	1M	1/16W	Metal Oxide	AA
R2032	VRS-CB1JF103JY	J	10k	1/16W	Metal Oxide	AA
R2034	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R2035	VRS-CA1JF472JY	J	4.7k	1/16W	Metal Oxide	AA
R2036	VRS-CA1JF332JY	J	3.3k	1/16W	Metal Oxide	AB
R2037	VRS-CA1JF472JY	J	4.7k	1/16W	Metal Oxide	AA
R2038	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R2042	VRS-CA1JF100JY	J	10	1/16W	Metal Oxide	AA
R2043	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R2044	VRS-CA1JF102JY	J	1k	1/16W	Metal Oxide	AA
R2045	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R2047	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R2049	VRS-CB1JF473JY	J	47k	1/16W	Metal Oxide	AC
R2050	VRS-CA1JF101JY	J	100	1/16W	Metal Oxide	AA
R2053	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R2054	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R2055	VRS-CY1JF822JY	J	8.2k	1/16W	Metal Oxide	AA
R2056	VRS-CY1JF223JY	J	22k	1/16W	Metal Oxide	AA
R2057	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R2058	VRS-CY1JF473FY	J	47k	1/16W	Metal Oxide	AA
R2059	VRS-CY1JF473FY	J	47k	1/16W	Metal Oxide	AA
R2060	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R2061	VRS-CA1JF000JY	J	00	1/16W	Metal Oxide	AB
R3101	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3102	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3103	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3104	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3105	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3108	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3111	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3113	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3115	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R3117	VRS-CY1JF473FY	J	47k	1/16W	Metal Oxide	AA
R3119	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3121	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3122	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3123	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3124	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3126	VRS-CY1JF470JY	J	47	1/16W	Metal Oxide	AA
R3129	VRS-CY1JF223FY	J	22k	1/16W	Metal Oxide	AA
R3131	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3134	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3136	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3137	VRS-CY1JF470JY	J	47	1/16W	Metal Oxide	AA
R3138	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3139	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3141	VRS-CY1JF222JY	J	2.2k	1/16W	Metal Oxide	AA
R3142	VRS-CA1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3145	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3146	VRS-CA1JF472JY	J	4.7k	1/16W	Metal Oxide	AA
R3148	VRS-CY1JF472JY	J	4.7k	1/16W	Metal Oxide	AA
R3149	VRS-CA1JF101JY	J	100	1/16W	Metal Oxide	AA
R3153	VRS-CY1JF335JY	J	3.3M	1/16W	Metal Oxide	AA
R3154	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3155	VRS-CY1JF472JY	J	4.7k	1/16W	Metal Oxide	AA
R3156	VRS-CY1JF470JY	J	47	1/16W	Metal Oxide	AA
R3157	VRS-CY1JF560JY	J	56	1/16W	Metal Oxide	AA
R3158	VRS-CY1JF682JY	J	6.8k	1/16W	Metal Oxide	AA
R3160	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3161	VRS-CY1JF470JY	J	47	1/16W	Metal Oxide	AA
R3162	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3163	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3164	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3165	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3166	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3167	VRS-CY1JF473JY	J	47k	1/16W	Metal Oxide	AA
R3168	VRS-CY1JF473JY	J	47k	1/16W	Metal Oxide	AA
R3169	VRS-CY1JF681JY	J	680	1/16W	Metal Oxide	AA
R3170	VRS-CY1JF473JY	J	47k	1/16W	Metal Oxide	AA
R3171	VRS-CY1JF273JY	J	27k	1/16W	Metal Oxide	AA
R3172	VRS-CY1JF392JY	J	3.9k	1/16W	Metal Oxide	AA
R3173	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3174	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3176	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3177	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R3179	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R3181	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R3183	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R3185	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R3186	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3187	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3189	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R3190	VRS-CA1JF101JY	J	100	1/16W	Metal Oxide	AA
R3194	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3195	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3196	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3206	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3207	VRS-CY1JF391JY	J	390	1/16W	Metal Oxide	AA
R3208	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R3209	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3210	VRS-CY1JF391JY	J	390	1/16W	Metal Oxide	AA
R3211	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R3212	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R3213	VRS-CY1JF391JY	J	390	1/16W	Metal Oxide	AA
R3214	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R3215	VRS-CY1JF221JY	J	220	1/16W	Metal Oxide	AA
R3216	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R3502	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA

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MAIN UNIT (Continued)

Ref. No.	Part No.	★			Description	Code
R3503	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3504	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3507	VRS-CY1JF391FY	J	390	1/16W	Metal Oxide	AA
R3509	VRS-CY1JF222FY	J	2.2k	1/16W	Metal Oxide	AA
R3510	VRS-CY1JF821FY	J	820	1/16W	Metal Oxide	AA
R3514	VRS-CY1JF471FY	J	470	1/16W	Metal Oxide	AA
R3515	VRS-CY1JF181FY	J	180	1/16W	Metal Oxide	AA
R3516	VRS-CY1JF122JY	J	1.2k	1/16W	Metal Oxide	AA
R3517	VRS-CY1JF182JY	J	1.8k	1/16W	Metal Oxide	AA
R3518	VRS-CY1JF471FY	J	470	1/16W	Metal Oxide	AA
R3519	VRS-CY1JF391FY	J	390	1/16W	Metal Oxide	AA
R3520	VRS-CY1JF562JY	J	5.6k	1/16W	Metal Oxide	AA
R3522	VRS-CY1JF911JY	J	910	1/16W	Metal Oxide	AB
R3523	VRS-CY1JF222FY	J	2.2k	1/16W	Metal Oxide	AA
R3525	VRS-CY1JF223JY	J	22k	1/16W	Metal Oxide	AA
R3526	VRS-CY1JF223JY	J	22k	1/16W	Metal Oxide	AA
R3527	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3530	VRS-CY1JF392JY	J	3.9k	1/16W	Metal Oxide	AA
R3532	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3533	VRS-CY1JF911JY	J	910	1/16W	Metal Oxide	AB
R3534	VRS-CY1JF682JY	J	6.8k	1/16W	Metal Oxide	AA
R3536	VRS-CY1JF105JY	J	1M	1/16W	Metal Oxide	AA
R3537	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3539	VRS-CY1JF105JY	J	1M	1/16W	Metal Oxide	AA
R3540	VRS-CY1JF102FY	J	1k	1/16W	Metal Oxide	AA
R3541	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R3543	VRS-CY1JF391JY	J	390	1/16W	Metal Oxide	AA
R3544	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3545	VRS-CY1JF472FY	J	4.7k	1/16W	Metal Oxide	AA
R3548	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3549	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3551	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R3552	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3553	VRS-CY1JF681JY	J	680	1/16W	Metal Oxide	AA
R3554	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R3556	VRS-TX2HF2R2JY	J	2.2	1/2W	Metal Oxide	AB
R3558	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3559	VRS-CY1JF221JY	J	220	1/16W	Metal Oxide	AA
R3560	VRS-CY1JF821FY	J	820	1/16W	Metal Oxide	AA
R3562	VRS-CY1JF471FY	J	470	1/16W	Metal Oxide	AA
R3563	VRS-CY1JF181FY	J	180	1/16W	Metal Oxide	AA
R3564	VRS-CY1JF122JY	J	1.2k	1/16W	Metal Oxide	AA
R3565	VRS-CY1JF471FY	J	470	1/16W	Metal Oxide	AA
R3566	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R3567	VRS-CY1JF473JY	J	47k	1/16W	Metal Oxide	AA
R3568	VRS-CY1JF224JY	J	220k	1/16W	Metal Oxide	AA
R3569	VRS-CY1JF682JY	J	6.8k	1/16W	Metal Oxide	AA
R3571	VRS-CY1JF392JY	J	3.9k	1/16W	Metal Oxide	AA
R3572	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3573	VRS-CY1JF222JY	J	2.2k	1/16W	Metal Oxide	AA
R3574	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R3575	VRS-CY1JF472JY	J	4.7k	1/16W	Metal Oxide	AA
R3576	VRS-CY1JF391JY	J	390	1/16W	Metal Oxide	AA
R3577	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3578	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R3579	VRS-CY1JF681JY	J	680	1/16W	Metal Oxide	AA
R3580	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R3583	VRS-CY1JF100JY	J	10	1/16W	Metal Oxide	AA
R3584	VRS-CA1JF271JY	J	270	1/16W	Metal Oxide	AB
R3585	VRS-CA1JF101JY	J	100	1/16W	Metal Oxide	AA
R3587	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3588	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3589	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3590	VRS-CY1JF331JY	J	330	1/16W	Metal Oxide	AA
R3591	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R3592	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R3593	VRS-CY1JF361JY	J	360	1/16W	Metal Oxide	AA
R3595	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R3596	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R3597	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R3598	VRS-TX2HF2R2JY	J	2.2	1/2W	Metal Oxide	AB
R3599	VRS-TX2HF2R2JY	J	2.2	1/2W	Metal Oxide	AB
R5001	VRS-CY1JF271JY	J	270	1/16W	Metal Oxide	AA
R5002	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R5003	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R5004	VRS-CY1JF392JY	J	3.9k	1/16W	Metal Oxide	AA
R5005	VRS-CY1JF222JY	J	2.2k	1/16W	Metal Oxide	AA
R5006	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R5007	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R5008	VRS-CY1JF271JY	J	270	1/16W	Metal Oxide	AA
R5009	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R5010	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R5011	VRS-CY1JF392JY	J	3.9k	1/16W	Metal Oxide	AA
R5012	VRS-CY1JF222JY	J	2.2k	1/16W	Metal Oxide	AA
R5013	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R5014	VRS-CY1JF473JY	J	47k	1/16W	Metal Oxide	AA
R5015	VRS-CY1JF123FY	J	12k	1/16W	Metal Oxide	AA
R5016	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R5017	VRS-CY1JF822FY	J	8.2k	1/16W	Metal Oxide	AA
R5018	VRS-CY1JF392JY	J	3.9k	1/16W	Metal Oxide	AA
R5019	VRS-CY1JF122JY	J	1.2k	1/16W	Metal Oxide	AA
R5020	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R5022	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R5025	VRS-CY1JF392FY	J	3.9k	1/16W	Metal Oxide	AA
R5026	VRS-CY1JF272FY	J	2.7k	1/16W	Metal Oxide	AA
R5028	VRS-CY1JF221JY	J	220	1/16W	Metal Oxide	AA
R5029	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R5030	VRS-CY1JF683JY	J	68k	1/16W	Metal Oxide	AA
R5032	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R5033	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R5034	VRS-CY1JF333JY	J	33k	1/16W	Metal Oxide	AA
R5035	VRS-CY1JF821JY	J	820	1/16W	Metal Oxide	AA
R5036	VRS-CY1JF331JY	J	330	1/16W	Metal Oxide	AA
R5037	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R5038	VRS-CY1JF470JY	J	47	1/16W	Metal Oxide	AA
R5039	VRS-CY1JF123JY	J	12k	1/16W	Metal Oxide	AA
R5041	VRS-CY1JF151FY	J	150	1/16W	Metal Oxide	AA
R5042	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R5043	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R5044	VRS-CY1JF272FY	J	2.7k	1/16W	Metal Oxide	AA
R5045	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R5046	VRS-CY1JF102FY	J	1k	1/16W	Metal Oxide	AA
R5047	VRS-CY1JF122JY	J	1.2k	1/16W	Metal Oxide	AA
R5051	VRS-CY1JF392FY	J	3.9k	1/16W	Metal Oxide	AA
R5052	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R5053	VRS-CY1JF101JY	J	100	1/16W	Metal Oxide	AA
R5055	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R5056	VRS-CY1JF472JY	J	4.7k	1/16W	Metal Oxide	AA
R5057	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R5059	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R5060	VRS-CY1JF470JY	J	47	1/16W	Metal Oxide	AA
R6008	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6009	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6010	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6011	VRS-CA1JF101JY	J	100	1/16W	Metal Oxide	AA
R6013	VRS-CA1JF470JY	J	47	1/16W	Metal Oxide	AB
R6015	VRS-CY1JF272JY	J	2.7k	1/16W	Metal Oxide	AA
R6016	VRS-CB1JF101JY	J	100	1/16W	Metal Oxide	AA
R6017	VRS-CB1JF101JY	J	100	1/16W	Metal Oxide	AA
R6020	VRS-CB1JF101JY	J	100	1/16W	Metal Oxide	AA
R6021	VRS-CB1JF101JY	J	100	1/16W	Metal Oxide	AA
R6022	VRS-CB1JF101JY	J	100	1/16W	Metal Oxide	AA
R6023	VRS-CB1JF101JY	J	100	1/16W	Metal Oxide	AA
R6024	VRS-CB1JF101JY	J	100	1/16W	Metal Oxide	AA
R6025	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6026	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R6027	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R6028	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R6029	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R6030	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R6045	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6046	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6047	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6048	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6049	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6050	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6051	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6052	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6053	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6054	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R6055	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA

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MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
R6056	VRS-TW2ED2R2JY	J	2.2 1/4W Metal Oxide	AA
R6057	VRS-TW2ED2R2JY	J	2.2 1/4W Metal Oxide	AA
R6058	VRS-TW2ED2R2JY	J	2.2 1/4W Metal Oxide	AA
R6059	VRS-CY1JF102JY	J	1k 1/16W Metal Oxide	AA
R8001	VRS-CB1JF332JY	J	3.3k 1/16W Metal Oxide	AC
R8004	VRS-CY1JF182JY	J	1.8k 1/16W Metal Oxide	AA
R8005	VRS-CY1JF103JY	J	10k 1/16W Metal Oxide	AA
R8007	VRS-CY1JF222JY	J	2.2k 1/16W Metal Oxide	AA
R8010	VRS-CA1JF000JY	J	00 1/16W Metal Oxide	AB
R8011	VRS-CY1JF000JY	J	0 1/16W Metal Oxide	AA
R8012	VRS-CB1JF000JY	J	00 1/16W Metal Oxide	AC
R8014	VRS-CB1JF470JY	J	47 1/16W Metal Oxide	AA
R8016	VRS-CA1JF470JY	J	47 1/16W Metal Oxide	AB
R8018	VRS-CA1JF000JY	J	00 1/16W Metal Oxide	AB
R8019	VRS-CB1JF332JY	J	3.3k 1/16W Metal Oxide	AC
R8020	VRS-CY1JF104JY	J	100k 1/16W Metal Oxide	AA
R8021	VRS-CY1JF332JY	J	3.3k 1/16W Metal Oxide	AA
R8023	VRS-CY1JF000JY	J	0 1/16W Metal Oxide	AA
R8027	VRS-CY1JF000JY	J	0 1/16W Metal Oxide	AA
R8030	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8031	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8032	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8033	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8034	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8035	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8036	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8037	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8038	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8039	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8040	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8041	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8042	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8043	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8044	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8045	VRS-CY1JF220JY	J	22 1/16W Metal Oxide	AA
R8048	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8049	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8050	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8055	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8056	VRS-CB1JF220JY	J	22 1/16W Metal Oxide	AC
R8057	VRS-CY1JF332JY	J	3.3k 1/16W Metal Oxide	AA
R8058	VRS-CY1JF102JY	J	1k 1/16W Metal Oxide	AA
R8059	VRS-CY1JF102JY	J	1k 1/16W Metal Oxide	AA
R8060	VRS-CY1JF102JY	J	1k 1/16W Metal Oxide	AA
R8061	VRS-CY1JF103FY	J	10k 1/16W Metal Oxide	AA
R8062	VRS-CY1JF470JY	J	47 1/16W Metal Oxide	AA
R8063	VRS-CY1JF102JY	J	1k 1/16W Metal Oxide	AA
R8064	VRS-CY1JF103JY	J	10k 1/16W Metal Oxide	AA
R8065	VRS-CY1JF470JY	J	47 1/16W Metal Oxide	AA
R8067	VRS-CY1JF103JY	J	10k 1/16W Metal Oxide	AA
R8084	VRS-CY1JF102JY	J	1k 1/16W Metal Oxide	AA
R8086	VRS-CY1JF102JY	J	1k 1/16W Metal Oxide	AA
R8088	VRS-CY1JF102JY	J	1k 1/16W Metal Oxide	AA
R8089	VRS-CY1JF102JY	J	1k 1/16W Metal Oxide	AA
R8091	VRS-CY1JF332JY	J	3.3k 1/16W Metal Oxide	AA
R8201	VRS-CY1JF102JY	J	1k 1/16W Metal Oxide	AA
R8202	VRS-CY1JF102JY	J	1k 1/16W Metal Oxide	AA
R8203	VRS-CY1JF103FY	J	10k 1/16W Metal Oxide	AA
R8204	VRS-CY1JF332FY	J	3.3k 1/16W Metal Oxide	AA
R8205	VRS-CY1JF332JY	J	3.3k 1/16W Metal Oxide	AA
R8206	VRS-CA1JF101JY	J	100 1/16W Metal Oxide	AA
R8208	VRS-CY1JF332JY	J	3.3k 1/16W Metal Oxide	AA

SWITCH

S2002	QSW-K0099TAZZY	J	Key Switch	AC

MISCELLANEOUS PARTS

FB1701	RBLN-0064TAZZY	J	Ferrite Bead	AB
FB1702	RBLN-0064TAZZY	J	Ferrite Bead	AB
FB1703	RBLN-0064TAZZY	J	Ferrite Bead	AB
FB1704	RBLN-0064TAZZY	J	Ferrite Bead	AB
FB1705	RBLN-0064TAZZY	J	Ferrite Bead	AB
FB1706	RBLN-0059CEZZY	J	Ferrite Bead	AB
FB1707	RBLN-0064TAZZY	J	Ferrite Bead	AB
FB1708	RBLN-0064TAZZY	J	Ferrite Bead	AB
FB1709	RBLN-0095CEZZY	J	Ferrite Bead	AD
FB1710	RBLN-0095CEZZY	J	Ferrite Bead	AD
FB1711	RBLN-0058TAZZY	J	Ferrite Bead	AC
FB1712	RBLN-0095CEZZY	J	Ferrite Bead	AD
FB1713	RBLN-0095CEZZY	J	Ferrite Bead	AD
FB1714	RBLN-0058TAZZY	J	Ferrite Bead	AC
FB1715	RBLN-0058TAZZY	J	Ferrite Bead	AC
FB1716	RBLN-0095CEZZY	J	Ferrite Bead	AD
FB1717	RBLN-0095CEZZY	J	Ferrite Bead	AD
FB1718	RBLN-0095CEZZY	J	Ferrite Bead	AD
FB2001	RBLN-0059CEZZY	J	Ferrite Bead	AB
FB2002	RBLN-0059CEZZY	J	Ferrite Bead	AB
FB2005	RBLN-0059CEZZY	J	Ferrite Bead	AB
FB2006	RBLN-0059CEZZY	J	Ferrite Bead	AB
FB2007	RBLN-0061TAZZY	J	Ferrite Bead	AD
FB2008	RBLN-0061TAZZY	J	Ferrite Bead	AD
FB2009	RBLN-0061TAZZY	J	Ferrite Bead	AD
FB2010	RBLN-0061TAZZY	J	Ferrite Bead	AD
FB3101	RBLN-0059CEZZY	J	Ferrite Bead	AB
FB3501	RBLN-0061TAZZY	J	Ferrite Bead	AD
FB3502	RBLN-0061TAZZY	J	Ferrite Bead	AD
FB3503	RBLN-0061TAZZY	J	Ferrite Bead	AD
FB3504	RBLN-0061TAZZY	J	Ferrite Bead	AD
FB3505	RBLN-0061TAZZY	J	Ferrite Bead	AD
FB3506	RBLN-0255TAZZY	J	Ferrite Bead	AA
FB3507	RBLN-0255TAZZY	J	Ferrite Bead	AA
FB6005	RBLN-1037CEZZY	J	Ferrite Bead	AB
FB8002	RBLN-0210TAZZY	J	Ferrite Bead	AB
FB8003	RBLN-0210TAZZY	J	Ferrite Bead	AB
P1701	QPLGN0582FJZZY	J	Plug, 30pin(ED)	AG
P1702	QPLGN0581FJZZY	J	Plug, 20pin(PG)	AF
P1703	QPLGN0464TAZZY	J	Plug, 4pin(FA)	AC
P1704	QPLGN0364TAZZY	J	Plug, 3pin(FB)	AC
P1705	QPLGN0176FJZZY	J	Plug, 4pin(FC)	AD
P1706	QPLGN0175FJZZY	J	Plug, 3pin(FD)	AC
P2001	QPLGN0174FJZZY	J	Plug, 2pin(TH)	AC
P2002	QPLGN0055CEZZY	J	Plug, 5pin(BA)	AD
P2003	QPLGN0059CEZZY	J	Plug, 9pin(KY)	AE
P2004	QPLGN0364TAZZY	J	Plug, 3pin(RB)	AC
P2011	QPLGN1058REZZY	J	Plug, 10pin(TD)	AD
P3501	QPLGN0963TAZZY	J	Plug, 9pin(TC)	AD
P3503	QPLGN0363TAZZY	J	Plug, 3pin(TF)	AC
P6001	QCNCW0031CEZZY	J	B to B Connector	AM
SC8001	QSOCN8003WJZZY	J	Socket, 80pin(DA)	AM

DUNTKB227DE02
KEY UNIT

RESISTORS

R2502	VRS-CY1JF000JY	J	0 1/16W Metal Oxide	AA
R2503	VRS-CB1JF101JY	J	100 1/16W Metal Oxide	AA
R2504	VRS-CB1JF101JY	J	100 1/16W Metal Oxide	AA

SWITCHES

S2501	QSW-KA001WJZZY	J	Switch, KEYSTONE	AD
S2502	QSW-KA001WJZZY	J	Switch, LEFT	AD
S2503	QSW-KA001WJZZY	J	Switch, UNDO	AD
S2504	QSW-KA001WJZZY	J	Switch, UP	AD
S2505	QSW-KA001WJZZY	J	Switch, ENTER	AD
S2506	QSW-KA001WJZZY	J	Switch, DOWN	AD
S2507	QSW-KA001WJZZY	J	Switch, MENU	AD
S2508	QSW-KA001WJZZY	J	Switch, RIGHT	AD
S2509	QSW-KA001WJZZY	J	Switch, OFF	AD
S2510	QSW-KA001WJZZY	J	Switch, MEMORY	AD
S2511	QSW-KA001WJZZY	J	Switch, INPUT	AD
S2512	QSW-KA001WJZZY	J	Switch, RESIZE	AD
S2514	QSW-KA001WJZZY	J	Switch, ON	AD

MISCELLANEOUS PART

P2501	QPLGN0974TAZZY	J	Plug, 9pin(KY)	AD

DUNTKE269DE02
FORMATTER UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC9001	VHiTCDCR83D-1Y	J	CDCR83DBQR	AR
IC9004	RH-iXA282WJN1Q	J	LHFABE06	AS
IC9007	VHiLP3962M1-1Y	J	LP3962EMPX-1.8	AM
IC9101	VHiA8902CLB-1Y	J	A8902CLBATR	BA
IC9102	VHiSNT1G14C-1Y	J	SN74AHCT1G14DC	AD
IC9301	RH-iXA384WJZZQ	J	IC	BP

Note: When exchanging the following parts, it becomes unit replacement correspondence.

IC9003	————————	-	2501963-0004	—
IC9006	————————	-	K4R271669D-TCS	—

TRANSISTOR

Ref. No.	Part No.	★	Description	Code
Q9101	VSDTC114EE/-1Y	J	DTC114EE	AB

DIODES AND THERMISTER

Ref. No.	Part No.	★	Description	Code
D9008	VHDSFPA73//2EY	J	VHDSFPA73	AD
D9102	VHDBAT54SWT-1Y	J	VHDBAT54SWT	AC
D9103	VHDBAT54SWT-1Y	J	VHDBAT54SWT	AC
D9104	VHDBAT54SWT-1Y	J	VHDBAT54SWT	AC
D9105	VHDBAT54SWT-1Y	J	VHDBAT54SWT	AC
D9301	VHDSFPB76//2EY	J	VHDSFPB76	AD
D9302	VHDSFPB76//2EY	J	VHDSFPB76	AD
TH9003	RH-HXA001WJZZ	J	Thermister	AD

PACKAGED CIRCUIT AND COILS

Ref. No.	Part No.	★	Description	Code
X9001	RCRUAA041WJZZY	J	Crystal	AN
X9002	RCRUAA042WJZZY	J	Crystal	AM
L9301	RCiLP0325TAZZY	J	Coil	AD
L9302	RCiLP0325TAZZY	J	Coil	AD

CAPACITORS

Ref. No.	Part No.	★				Code
C9001	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C9002	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9003	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9004	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9006	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9007	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9008	VCCCCY1HH680JY	J	68p	50V	Ceramic	AA
C9009	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9010	VCCCCY1HH680JY	J	68p	50V	Ceramic	AA
C9011	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9013	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9014	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9015	VCKYCY1AB154KY	J	0.15	10V	Ceramic	AB
C9016	VCKYCY1AB154KY	J	0.15	10V	Ceramic	AB
C9019	VCSNDE0GP107MY	J	100	4V		AF
C9021	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9022	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C9023	VCKYCY1CB104KY	J	0.1	16V	Ceramic	AB
C9024	VCCCCY1HH680JY	J	68p	50V	Ceramic	AA
C9025	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9026	VCCCCY1HH680JY	J	68p	50V	Ceramic	AA
C9027	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9028	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C9029	VCKYCY1CB104KY	J	0.1	16V	Ceramic	AB
C9030	VCCCCY1HH4R0CY	J	4.0p	50V	Ceramic	AA
C9032	VCKYCY1CB104KY	J	0.1	16V	Ceramic	AB
C9034	VCKYCY1CB104KY	J	0.1	16V	Ceramic	AB
C9035	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9036	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9038	VCKYCY1CB104KY	J	0.1	16V	Ceramic	AB
C9041	VCKYCY1CB104KY	J	0.1	16V	Ceramic	AB
C9042	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9043	VCKYCY1CB104KY	J	0.1	16V	Ceramic	AB
C9044	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9045	VCKYCY1CB104KY	J	0.1	16V	Ceramic	AB
C9050	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9053	VCKYCY1CB104KY	J	0.1	16V	Ceramic	AB
C9055	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9057	VCKYCY1CB104KY	J	0.1	16V	Ceramic	AB
C9059	VCKYCY1CB104KY	J	0.1	16V	Ceramic	AB
C9061	VCKYCY1CB104KY	J	0.1	16V	Ceramic	AB
C9062	VCKYCY1CB104KY	J	0.1	16V	Ceramic	AB
C9063	VCSNDE0GP107MY	J	100	4V		AF
C9065	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C9067	VCAAPC1AJ106MY	J	10	10V	Electrolytic	AE
C9069	VCSNDE0GP107MY	J	100	4V		AF
C9071	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9072	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9073	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9102	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9103	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9104	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9105	VCAAPC1CJ396MY	J	39	16V	Electrolytic	AG
C9106	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9107	VCKYCY1HB332KY	J	3300p	50V	Ceramic	AA
C9108	VCKYCY1HB332KY	J	3300p	50V	Ceramic	AA
C9109	VCKYCY1HB472KY	J	4700p	50V	Ceramic	AA
C9110	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C9111	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9112	VCKYCY1HF224ZY	J	0.22	50V	Ceramic	AA
C9113	VCKYCY1HB562KY	J	5600p	50V	Ceramic	AA
C9115	VCKYCY1AB154KY	J	0.15	10V	Ceramic	AB
C9116	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C9117	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C9118	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C9302	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9303	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9305	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9306	VCKYCY1HF104ZY	J	0.1	50V	Ceramic	AA
C9307	VCKYCY1HF104ZY	J	0.1	50V	Ceramic	AA
C9308	VCEAPF1HW105MY	J	1	50V	Electrolytic	AB
C9309	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9310	VCKYCY1HF104ZY	J	0.1	50V	Ceramic	AA
C9311	VCKYCY1HF104ZY	J	0.1	50V	Ceramic	AA
C9314	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C9315	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9316	RC-KZ0046TAZZY	J	4.7	35V	Ceramic	AD
C9317	RC-KZ0046TAZZY	J	4.7	35V	Ceramic	AD
C9319	RC-KZA048WJZZY	J	10	25V	Ceramic	AD
C9320	RC-KZ0046TAZZY	J	4.7	35V	Ceramic	AD
C9321	VCKYCY1HF224ZY	J	0.22	50V	Ceramic	AA
C9503	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9504	VCKYCY1HB102KY	J	1000p	50V	Ceramic	AA
C9505	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9510	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9511	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9513	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9514	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9515	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9516	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9517	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9519	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9520	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9521	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9522	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9523	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
C9524	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9525	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9528	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9529	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9530	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9531	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9532	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9533	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9535	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9536	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9537	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9538	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9542	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9544	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9545	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9546	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9547	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9548	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9549	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9550	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9551	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9552	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9553	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9554	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA

Ref. No.	Part No.	★	Description			Code

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FORMATTER UNIT (Continued)

C9555	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9558	VCEAPF0GW227MY	J	220	4.0V	Electrolytic	AD
C9564	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C9565	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA

RESISTORS

FB9005	VRS-TV1JD000JY	J	0	1/10W	Metal Oxide	AA
R9001	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R9003	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R9005	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R9006	VRS-CY1JF111FY	J	110	1/16W	Metal Oxide	AA
R9007	VRS-CY1JF111FY	J	110	1/16W	Metal Oxide	AA
R9008	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R9010	VRS-CY1JF560FY	J	56	1/16W	Metal Oxide	AA
R9011	VRS-CY1JF560FY	J	56	1/16W	Metal Oxide	AA
R9116	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R9118	VRS-CB1JF101JY	J	100	1/16W	Metal Oxide	AA
R9120	VRS-CB1JF101JY	J	100	1/16W	Metal Oxide	AA
R9131	VRS-CY1JF184JY	J	180k	1/16W	Metal Oxide	AA
R9132	VRN-CY1JF472DY	J	4.7k	1/16W	Metal Film	AA
R9135	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R9136	VRS-CY1JF390FY	J	39	1/16W	Metal Oxide	AA
R9137	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R9138	VRS-CY1JF220FY	J	22	1/16W	Metal Oxide	AA
R9140	VRS-CB1JF102JY	J	1k	1/16W	Metal Oxide	AA
R9141	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R9143	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R9145	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R9147	VRS-CY1JF305JY	J	3M	1/16W	Metal Oxide	AA
R9148	VRS-TW2ED151JY	J	150	1/4W	Metal Oxide	AA
R9149	VRS-TW2ED151JY	J	150	1/4W	Metal Oxide	AA
R9150	VRS-TW2ED151JY	J	150	1/4W	Metal Oxide	AA
R9201	VRK-CD1JJ390FY	J	39	1/16W	Metal Composition	AC
R9202	VRK-CD1JJ390FY	J	39	1/16W	Metal Composition	AC
R9203	VRK-CD1JJ390FY	J	39	1/16W	Metal Composition	AC
R9204	VRS-CY1JF390FY	J	39	1/16W	Metal Oxide	AA
R9205	VRS-CY1JF390FY	J	39	1/16W	Metal Oxide	AA
R9206	VRS-CY1JF390FY	J	39	1/16W	Metal Oxide	AA
R9207	VRS-CY1JF390FY	J	39	1/16W	Metal Oxide	AA
R9301	VRS-CF1JP220JY	J	22	1/16W	Metal Oxide	AC
R9302	VRS-CF1JP220JY	J	22	1/16W	Metal Oxide	AC
R9303	VRS-CB1JF220JY	J	22	1/16W	Metal Oxide	AC
R9304	VRS-CF1JP220JY	J	22	1/16W	Metal Oxide	AC
R9305	VRS-CF1JP220JY	J	22	1/16W	Metal Oxide	AC
R9306	VRS-CF1JP220JY	J	22	1/16W	Metal Oxide	AC
R9307	VRS-CF1JP220JY	J	22	1/16W	Metal Oxide	AC
R9308	VRS-CF1JP220JY	J	22	1/16W	Metal Oxide	AC
R9309	VRS-CF1JP220JY	J	22	1/16W	Metal Oxide	AC
R9310	VRS-CA1JF220JY	J	22	1/16W	Metal Oxide	AA
R9312	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R9315	VRS-CA1JF102JY	J	1k	1/16W	Metal Oxide	AA
R9316	VRS-CY1JF000JY	J	0	1/16W	Metal Oxide	AA
R9319	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R9502	VRS-CY1JF222JY	J	2.2k	1/16W	Metal Oxide	AA
R9503	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R9506	VRS-CY1JF240FY	J	24	1/16W	Metal Oxide	AA
R9507	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R9508	VRS-CA1JF102JY	J	1k	1/16W	Metal Oxide	AA
R9509	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R9510	VRS-CY1JF240FY	J	24	1/16W	Metal Oxide	AA
R9512	VRS-CY1JF222JY	J	2.2k	1/16W	Metal Oxide	AA
R9518	VRS-CY1JF240FY	J	24	1/16W	Metal Oxide	AA
R9522	VRS-CA1JF103JY	J	10k	1/16W	Metal Oxide	AA
R9532	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R9542	VRS-CY1JF111FY	J	110	1/16W	Metal Oxide	AA
R9554	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R9559	VRS-CY1JF470JY	J	47	1/16W	Metal Oxide	AA
R9560	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R9562	VRS-CY1JF330FY	J	33	1/16W	Metal Oxide	AA
R9565	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA
R9567	VRS-CY1JF121FY	J	120	1/16W	Metal Oxide	AA
R9569	VRS-CY1JF102JY	J	1k	1/16W	Metal Oxide	AA
R9574	VRS-CY1JF222JY	J	2.2k	1/16W	Metal Oxide	AA
R9575	VRS-CY1JF222JY	J	2.2k	1/16W	Metal Oxide	AA
R9591	VRS-TW2ED000JY	J	0	1/4W	Metal Oxide	AB
R9592	VRS-CY1JF103JY	J	10k	1/16W	Metal Oxide	AA

SWITCHES

S9001	QSW-S0203TAZZY	J	Slide Switch	AD
S9002	QSW-S0203TAZZY	J	Slide Switch	AD

MISCELLANEOUS PARTS

FB9004	RBLN-0210TAZZY	J	Ferrite Bead	AB
FB9101	RBLN-0210TAZZY	J	Ferrite Bead	AB
FB9502	RBLN-0210TAZZY	J	Ferrite Bead	AB
FB9507	RBLN-0210TAZZY	J	Ferrite Bead	AB
FB9006	RBLN-0061TAZZY	J	Ferrite Bead	AD
FB9007	RBLN-0095CEZZY	J	Ferrite Bead	AD
FB9008	RBLN-0095CEZZY	J	Ferrite Bead	AD
FB9009	RBLN-0095CEZZY	J	Ferrite Bead	AD
FB9102	RBLN-0095CEZZY	J	Ferrite Bead	AD
P9002	QPLGN0581FJZZY	J	Plug, 20pin(PG)	AF
P9003	QPLGN0363TAZZY	J	Plug, 3pin(DB)	AC
SC9001	QSOCN8003WJZZY	J	Socket, 80pin(DA)	AM
SC9101	QCNCW0040CEZZY	J	Socket, 4pin(DD)	AB

DUNTKB313DE02
TERMINAL1 UNIT

RESISTORS

R4001	VRS-TW2ED750JY	J	75	1/4W	Metal Oxide	AA
R4002	VRS-TW2ED750JY	J	75	1/4W	Metal Oxide	AA
R4003	VRS-TW2ED750JY	J	75	1/4W	Metal Oxide	AA
R4004	VRS-TW2ED750JY	J	75	1/4W	Metal Oxide	AA
R4005	VRS-TW2ED750JY	J	75	1/4W	Metal Oxide	AA
R4006	VRS-TW2ED750JY	J	75	1/4W	Metal Oxide	AA

MISCELLANEOUS PARTS

FB4001	RBLN-0058CEZZY	J	Ferrite Bead	AB
FB4002	RBLN-0058CEZZY	J	Ferrite Bead	AB
FB4003	RBLN-0058CEZZY	J	Ferrite Bead	AB
FB4004	RBLN-0058CEZZY	J	Ferrite Bead	AB
FB4005	RBLN-0058CEZZY	J	Ferrite Bead	AB
FB4006	RBLN-0058CEZZY	J	Ferrite Bead	AB
FB4008	RBLN-0058CEZZY	J	Ferrite Bead	AB
FB4009	RBLN-0058CEZZY	J	Ferrite Bead	AB
J4001	QJAKGA019WJZZ	J	Jack, Component	AG
P4001	QCNCM0039CEZZY	J	B to B Connector	AM
SC4001	QSOCN0344FJZZ	J	Socket, Component/RGB	AM

DUNTKB315DE02
LED UNIT

RESISTORS

R401	VRS-TW2ED750JY	J	75	1/4W	Metal Oxide	AA
R402	VRS-TW2ED750JY	J	75	1/4W	Metal Oxide	AA
R403	VRS-TW2ED750JY	J	75	1/4W	Metal Oxide	AA

MISCELLANEOUS PARTS

FB401	RBLN-0058CEZZY	J	Ferrite Bead	AB
FB402	RBLN-0058CEZZY	J	Ferrite Bead	AB
FB403	RBLN-0058CEZZY	J	Ferrite Bead	AB
FB407	RBLN-0058CEZZY	J	Ferrite Bead	AB
FB408	RBLN-0058CEZZY	J	Ferrite Bead	AB
J401	QSOCD0439CEZZ	J	DIN Jack, S-Video	AF
J402	QJAKE0106GJZZ	J	Jack, Video	AE
P402	QPLGN1263TAZZY	J	Plug, 12pin(TC)	AD
SC401	QSOCN0345FJZZ	J	RS-232C Port	AM

DUNTKB315DE02
LED UNIT

TRANSISTORS

Q2551	VSDTC144EUA-1Y	J	DTC144EUA	AB
Q2552	VSRN1704///-1Y	J	RN1704	AC

Ref. No.	Part No.	★	Description			Code
DUNTKB315DE02 LED UNIT (Continued)						
Q2553	VSRN1704///-1Y	J	RN1704			AC
DIODES						
D2551	RH-PX0210TAZZY	J	LED,GREEN/RED			AC
D2552	RH-PX0210TAZZY	J	LED,GREEN/RED			AC
D2553	RH-PX0196TAZZY	J	LED,RED			AC
CAPACITORS						
C2551	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C2552	VCEAPF1CW106MY	J	10	16V	Electrolytic	AB
RESISTORS						
R2551	VRS-TV1JD471JY	J	470	1/10W	Metal Oxide	AA
R2552	VRS-TV1JD122JY	J	1.2k	1/10W	Metal Oxide	AA
R2553	VRS-TV1JD471JY	J	470	1/10W	Metal Oxide	AA
R2554	VRS-TV1JD122JY	J	1.2k	1/10W	Metal Oxide	AA
R2555	VRS-TV1JD122JY	J	1.2k	1/10W	Metal Oxide	AA
MISCELLANEOUS PARTS						
P2551	QPLGN1063TAZZY	J	Plug, 10pin(TD)			AD
P2552	QPLGN0364TAZZY	J	Plug, 3pin(RA)			AC
DUNTKB351DE02 FRONT R/C UNIT						
CAPACITORS						
C1551	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1552	VCEAPF1CW107MY	J	100	16V	Electrolytic	AC
RESISTORS						
R1551	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R1552	VRS-TX2HF220JY	J	22	1/2W	Metal Oxide	AB
MISCELLANEOUS PARTS						
P1551	QPLGN0364TAZZY	J	Plug, 3pin(RA)			AC
RMC1551	RRMCU0237CEZZ	J	R/C Reciever			AF
DUNTKB352DE02 REAR R/C UNIT						
CAPACITORS						
C1501	VCKYCY1EF104ZY	J	0.1	25V	Ceramic	AA
C1502	VCEAPF1CW107MY	J	100	16V	Electrolytic	AC
RESISTORS						
R1501	VRS-CY1JF471JY	J	470	1/16W	Metal Oxide	AA
R1502	VRS-TX2HF220JY	J	22	1/2W	Metal Oxide	AB
MISCELLANEOUS PARTS						
P1501	QPLGN0364TAZZY	J	Plug, 3pin(RB)			AC
RMC1501	RRMCU0237CEZZ	J	R/C Reciever			AF
RDENCA018WJZZ POWER UNIT						
INTEGRATED CIRCUITS						
⚠ IC7001	9HU59350207	J	UCC3818D			AT
⚠ IC7003	9HU59850007	J	L6574D			AT
IC7102	9HU51300311	J	SI8033S			AS
IC7103	9HU59600007	J	HA17431UA			AH
IC7104	9HU51113011	J	PQ07VK02FZ			AR
TRANSISTORS						
Q7001	9HU49120107	J	2SC2712GR			AD
Q7002	9HU49100607	J	2SA1213Y			AF
Q7003	9HU49120107	J	2SC2712GR			AD
Q7004	9HU49120107	J	2SC2712GR			AD
Q7005	9HU49120107	J	2SC2712GR			AD
Q7006	9HU49100607	J	2SA1213Y			AF
Q7007	9HU49100107	J	2SA1162GR			AD
Q7008	9HU42400211	J	2SK3235			AS
Q7009	9HU42400111	J	2SK3233			AS
Q7010	9HU42400111	J	2SK3233			AS
Q7011	9HU49300207	J	DTA114EKA			AE
Q7012	9HU49310007	J	DTC114EKA			AE
Q7013	9HU40221104	J	2SC2655			AF
Q7101	9HU49120107	J	2SC2712GR			AD
Q7102	9HU49310007	J	DTC114EKA			AE
DIODES						
⚠ D7001	9HU33005011	J	D10XB60			AN
D7002	9HU39100007	J	1SS181			AD
D7003	9HU39451507	J	M1FS4			AE
D7004	9HU31125111	J	SF10L60U			AL
D7005	9HU39100107	J	1SS184			AD
D7006	9HU39100107	J	1SS184			AD
D7007	9HU39100107	J	1SS184			AD
D7010	9HU39100007	J	1SS181			AD
D7011	9HU39100107	J	1SS184			AD
D7012	9HU39100107	J	1SS184			AD
D7013	9HU39100307	J	1SS226			AD
D7014	9HU39150107	J	U1DL44A			AF
D7015	9HU39101607	J	1SS352			AE
D7016	9HU39451507	J	M1FS4			AE
D7101	9HU39100107	J	1SS184			AD
D7102	9HU31125311	J	SF10SC4			AK
D7103	9HU31121011	J	SF5LC20U			AK
D7104	9HU31300111	J	FMB-24M			AL
D7107	9HU39100007	J	1SS181			AD
ZD7001	9HU32006801	J	Zener Diode, 18V			AD
ZD7002	9HU39325507	J	Zener Diode, 2.4V			AD
ZD7003	9HU39326707	J	Zener Diode, 18V			AD
ZD7004	9HU39330107	J	Zener Diode, 16V			AD
ZD7005	9HU39331207	J	Zener Diode, 6.2V			AD
ZD7101	9HU39331707	J	Zener Diode, 9.1V			AD
ZD7102	9HU39330607	J	Zener Diode, 24V			AD
COILS AND TRANSFORMERS						
⚠ L7001	9HU60311811	J	FK-050C-3020			AN
L7002	9HU60310011	J	SK-10M5Y			AN
L7003	9HU60306311	J	HKS-12D080-1121RZ			AT
L7005	9HU69400007	J	N3216ZP501			AN
L7006	9HU69400007	J	N3216ZP501			AN
L7008	9HU69400007	J	N3216ZP501			AN
L7009	9HU64100204	J	B-01-RS			AF
L7010	9HU64550511	J	MA055 R-14/7/7B			AM
L7101	9HU60306411	J	HK-05S040-1510			AN
⚠ T7001	9HU60131811	J	T23861A			AX
PACKAGED CIRCUIT						
⚠ PC7001	9HU52001611	J	Photo Coupler, PC123			AH
⚠ PC7002	9HU52001611	J	Photo Coupler, PC123			AH
⚠ PC7003	9HU52001611	J	Photo Coupler, PC123			AH
⚠ PC7004	9HU52001611	J	Photo Coupler, PC123			AH
⚠ TH7001	9HU16511466	J	Thermister, 5.1Ω			AN
TH7003	9HU16570611	J	Thermister, PTH9M04BB222TS2F333			AN
CAPACITORS						
⚠ C7001	9HU23605266	J	2200p	AC250V	TYPE-KX	AF
⚠ C7002	9HU23605266	J	2200p	AC250V	TYPE-KX	AF
⚠ C7003	9HU22910366	J	0.22	AC250V		AE
C7004	9HU22910266	J	1	AC250V		AK
C7005	9HU28220007	J	1000p	50V		AE
C7006	9HU28220007	J	1000p	50V		AE
C7007	9HU22900711	J	0.01	450V		AF
C7008	9HU28145507	J	2.2	6.3V		AF
C7009	9HU22580011	J	41	450V		AM
C7010	9HU28202107	J	680p	50V		AF
C7011	9HU28220607	J	0.01	50V		AF
C7012	9HU28025007	J	1	25V		AF
C7013	9HU28125707	J	0.22	25V		AF
C7014	9HU28202007	J	470p	50V		AF
C7015	9HU28220607	J	0.01	50V		AF
C7016	9HU28220907	J	0.1	25V		AF
C7017	9HU21228105	J	33	35V		AE
C7018	9HU28320607	J	1000p	630V		AG
C7019	9HU28220607	J	0.01	50V		AF
C7020	9HU28320607	J	1000p	630V		AG

RDENCA018WJZZ
POWER UNIT (Continued)

Ref. No.	Part No.	★	Description			Code
C7021	9HU21517466	J	68	400V	Electrolytic	AQ
C7022	9HU28220607	J	0.01	50V		AF
C7023	9HU21143105	J	10	16V	Electrolytic	AE
C7024	9HU28235007	J	0.22	10V		AF
C7025	9HU28255007	J	0.47	6.3V		AF
C7026	9HU28235007	J	0.22	10V		AF
C7027	9HU28201807	J	330p	50V		AF
C7028	9HU28220907	J	0.1	25V		AF
C7029	9HU21226305	J	100	25V	Electrolytic	AE
C7030	9HU28220907	J	0.1	25V		AF
C7031	9HU28265007	J	0.1	25V		AF
C7032	9HU28121207	J	0.1	50V		AF
C7033	9HU28220007	J	1000p	50V		AE
C7034	9HU28125707	J	0.22	50V		AF
C7035	9HU28202007	J	470p	50V		AF
C7037	9HU21470204	J	100	50V	Electrolytic	AE
C7038	9HU28020007	J	0.1	50V		AF
C7039	9HU28165407	J	2.2	25V		AF
C7040	9HU28205407	J	1000p	25V		AF
C7041	9HU21230705	J	22	50V	Electrolytic	AE
C7042	9HU28321407	J	100p	1kV		AH
C7043	9HU28321407	J	100p	1kV		AH
C7044	9HU22763266	J	0.012	630V		AK
C7045	9HU21230905	J	47	50V		AE
C7046	9HU28320307	J	330p	1kV		AH
C7047	9HU28320307	J	330p	1kV		AH
C7048	9HU28025007	J	1	25V		AF
C7050	9HU21517466	J	68	400V	Electrolytic	AQ
C7051	9HU23605166	J	1500p	TYPE-KX		AG
C7052	9HU28326007	J	0.022	630V		AG
C7053	9HU28326007	J	0.022	630V		AG
C7054	9HU23604266	J	220p	TYPE-KX		AF
C7055	9HU23604266	J	220p	TYPE-KX		AF
C7056	9HU28220907	J	0.1	25V		AF
C7101	9HU28220907	J	0.1	25V		AF
C7102	9HU21466704	J	1500	25V	Electrolytic	AF
C7103	9HU28270007	J	0.22	25V		AF
C7105	9HU21462104	J	3300	10V	Electrolytic	AF
C7107	9HU28130107	J	1	16V		AF
C7108	9HU21462004	J	1000	10V		AF
C7110	9HU28265007	J	0.1	25V		AF
C7111	9HU21230705	J	22	50V	Electrolytic	AE
C7112	9HU28265007	J	0.1	25V		AF
SA7001	9HU24010104	J	ENE 471D-10A			AE

RESISTORS

R7001	9HU18900107	J	220k	1/8W		AD
R7002	9HU18900107	J	220k	1/8W		AD
R7003	9HU18900107	J	220k	1/8W		AD
R7004	9HU18030007	J	2.7k	1/16W		AD
R7005	9HU18030307	J	22k	1/16W		AD
R7006	9HU18000907	J	4.7k	1/16W		AD
R7007	9HU18004807	J	30k	1/16W		AD
R7008	9HU18036907	J	1.5k	1/16W		AD
R7009	9HU14107311	J	0.082	2W		AD
R7010	9HU18210507	J	220k	1/8W		AD
R7011	9HU18135607	J	1.5k	1/10W		AD
R7012	9HU18210507	J	220k	1/8W		AD
R7013	9HU18210507	J	220k	1/8W		AD
R7014	9HU18201307	J	33	1/8W		AD
R7015	9HU18300707	J	18	1/4W		AD
R7016	9HU18300707	J	18	1/4W		AD
R7017	9HU18300107	J	10	1/4W		AD
R7018	9HU18032707	J	15k	1/16W		AD
R7019	9HU18003307	J	3.9k	1/16W		AD
R7020	9HU18031507	J	2.2	1/16W		AD
R7021	9HU18002907	J	12K	1/16W		AD
R7022	9HU18300707	J	18	1/4W		AD
R7023	9HU18300707	J	18	1/4W		AD
R7024	9HU18001007	J	47k	1/16W		AD
R7025	9HU18031907	J	18k	1/16W		AD
R7026	9HU18000607	J	22k	1/16W		AD
R7027	9HU18031907	J	18k	1/16W		AD
R7028	9HU18031607	J	12k	1/16W		AD
R7029	9HU18214007	J	4.7	1/8W		AD
R7030	9HU18033807	J	2.4k	1/16W		AD
R7031	9HU18033807	J	2.4k	1/16W		AD
R7032	9HU18240907	J	330k	1/8W		AD
R7033	9HU18240907	J	330k	1/8W		AD
R7034	9HU18240907	J	330k	1/8W		AD
R7035	9HU18002107	J	27k	1/16W		AD
R7036	9HU18240907	J	330k	1/8W		AD
R7037	9HU18240907	J	330k	1/8W		AD
R7038	9HU18240907	J	330k	1/8W		AD
R7039	9HU18033807	J	2.4k	1/16W		AD
R7040	9HU18000207	J	10k	1/16W		AD
R7041	9HU18003907	J	2.2k	1/16W		AD
R7042	9HU18000207	J	10k	1/16W		AD
R7043	9HU18001607	J	1k	1/16W		AD
R7044	9HU18000907	J	4.7k	1/16W		AD
R7045	9HU18109507	J	82k	1/10W		AD
R7046	9HU18239607	J	91k	1/8W		AD
R7047	9HU18000207	J	10k	1/16W		AD
R7048	9HU18208507	J	33k	1/8W		AD
R7049	9HU18206807	J	6.2k	1/8W		AD
R7050	9HU18035907	J	91k	1/16W		AD
R7051	9HU18001007	J	47k	1/16W		AD
R7052	9HU18000207	J	10k	1/16W		AD
R7053	9HU18036107	J	9.1k	1/16W		AD
R7054	9HU18001007	J	47k	1/16W		AD
R7055	9HU18000207	J	10k	1/16W		AD
R7056	9HU18209307	J	68k	1/8W		AD
R7058	9HU13170924	J	150k	2W		AD
R7059	9HU18208907	J	47k	1/8W		AD
R7060	9HU18200107	J	10	1/8W		AD
R7061	9HU18200107	J	10	1/8W		AD
R7062	9HU18237107	J	8.2k	1/8W		AD
R7063	9HU18036407	J	36k	1/16W		AD
R7064	9HU18202507	J	100	1/8W		AD
R7065	9HU18202507	J	100	1/8W		AD
R7066	9HU18001007	J	47k	1/16W		AD
R7067	9HU18001007	J	47k	1/16W		AD
R7068	9HU18300107	J	10	1/4W		AD
R7069	9HU18032807	J	360	1/16W		AD
R7070	9HU13045124	J	10k	2W		AD
R7073	9HU18208907	J	47k	1/8W		AD
R7074	9HU18001607	J	1k	1/16W		AD
R7075	9HU18214007	J	4.7	1/8W		AD
R7076	9HU18240907	J	330k	1/8W		AD
R7077	9HU18240907	J	330k	1/8W		AD
R7078	9HU18240907	J	330k	1/8W		AD
R7079	9HU18032707	J	15k	1/16W		AD
R7080	9HU18001607	J	1k	1/16W		AD
R7101	9HU18001607	J	1k	1/16W		AD
R7102	9HU18204907	J	1k	1/8W		AD
R7103	9HU18001607	J	1k	1/16W		AD
R7104	9HU18204907	J	1k	1/8W		AD
R7106	9HU18001607	J	1k	1/16W		AD
R7107	9HU18205707	J	2.2k	1/8W		AD
R7109	9HU18000207	J	10k	1/16W		AD
R7110	9HU18036507	J	3k	1/16W		AD
R7111	9HU18032207	J	1.2k	1/16W		AD
R7112	9HU18030007	J	2.7k	1/16W		AD
R7114	9HU18000207	J	10k	1/16W		AD
R7115	9HU18032907	J	1k	1/16W		AD
R7116	9HU18206507	J	4.7k	1/8W		AD
R7117	9HU18206107	J	3.3k	1/8W		AD
R7118	9HU18032907	J	1k	1/16W		AD
R7119	9HU18036607	J	82	1/16W		AD
R7120	9HU18205307	J	4.7k	1/8W		AD
R7122	9HU18206507	J	4.7k	1/8W		AD
R7123	9HU18000207	J	10k	1/16W		AD
R7125	9HU18230107	J	10	1/4W		AD
R7126	9HU18032807	J	360	1/8W		AD
R7465	95C0R3Q4S1220	J	1.2k	1/16W		AB

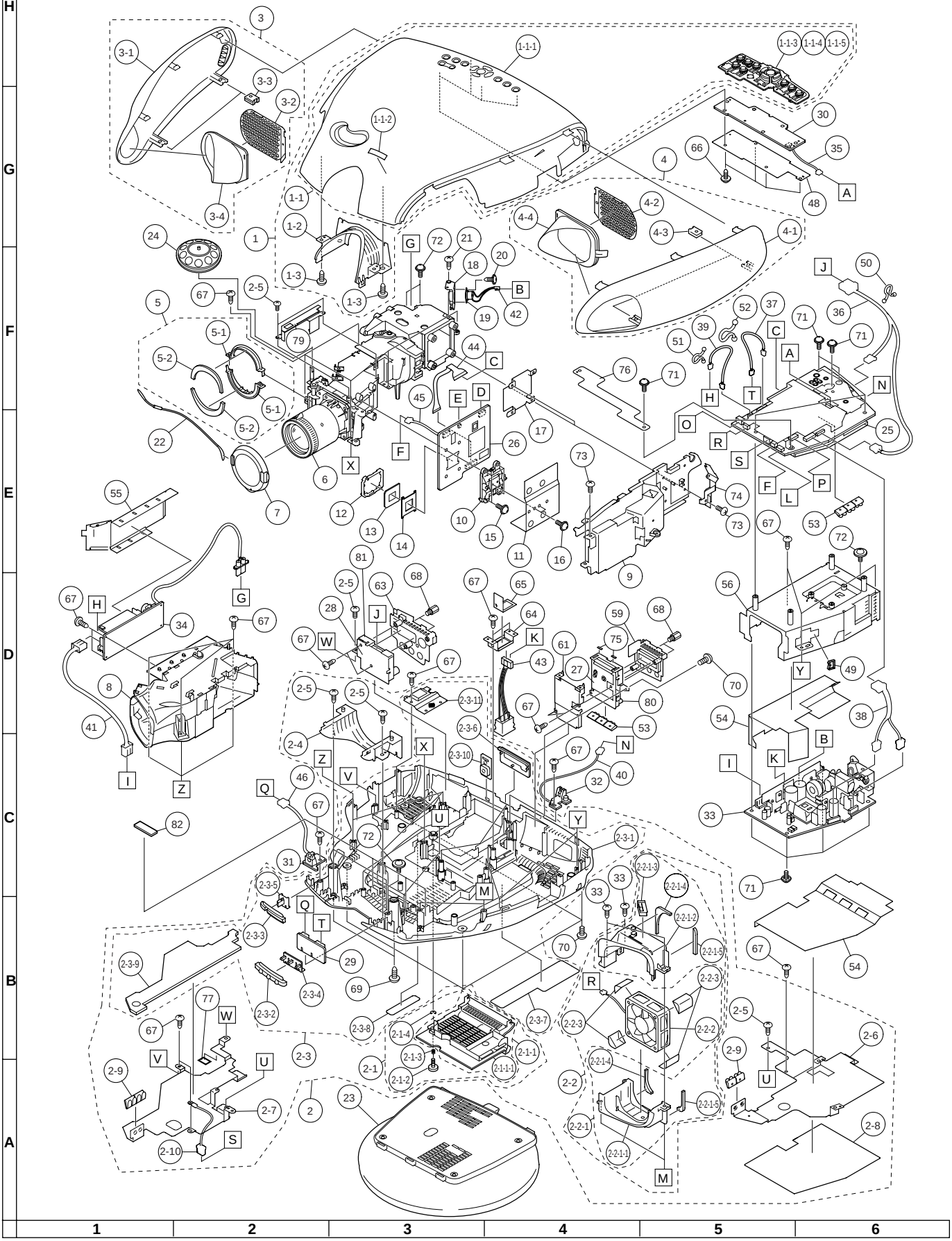
MISCELLANEOUS PARTS

BEA7301	95C0L551A0020	J	BL02RN2-R62 T2		AE
CN7102	95CK2107KS012	J	MDF7P-12DP-2.54DSA		AS
CN7101	95C0WPF2013B0	J	Plug, 5-pin		AV

CABINET AND MECHANICAL PARTS

Ref. No.	Part No.	★	Description	Code
1	*Not Available*	-	Top Body Ass'y	—
1-1	DBDYTA009WJ01	J	Top Body Ass'y (XV-Z90E)	BP
1-1	DBDYTA025WJ01	J	Top Body Ass'y (XV-Z91E)	BP
1-1-1	*Not Available*	-	Top Body	—
1-1-2	HiNDP5799CESA	J	Lens Caution Label	AD
1-1-3	JBTN-A034WJZZ	J	Key Button Base	AF
1-1-4	JBTN-A035WJSA	J	key Button Cursol	AX
1-1-5	JBTN-A036WJSA	J	Key Button Top	AR
1-2	GCOVAA380WJKA	J	Lens Cover (Top)	AT
1-3	XEBSD30P10000	J	Screw	AA
2	*Not Available*	-	Bottom Body Ass'y	—
2-1	*Not Available*	-	Lamp Door Ass'y	—
2-1-1	DDORUA002WJ01	J	Lamp Door Ass'y	AU
2-1-1-1	*Not Available*	-	Lamp Door	—
2-1-2	LX-BZ1009CEFN	J	Screw	AE
2-1-3	MSPRC0202CEFW	J	Spring	AB
2-1-4	XRESJ30-06000	J	E Ring	AA
2-2	*Not Available*	-	Fan Duct Ass'y	—
2-2-1	DDUC-A004WJ01	J	Fan Duct Ass'y	AP
2-2-1-1	*Not Available*	-	Duct (Bottom)	—
2-2-1-2	PDUC-A005WJKZ	J	Duct (Top)	AG
2-2-1-3	LHLDW1173CEZZ	J	Wire Holder	AD
2-2-1-4	PSPAZA052WJKZ	J	Spacer A	AB
2-2-1-5	PSPAZA053WJKZ	J	Spacer B	AB
2-2-2	NFANRA008WJ00	J	Power Unit Fan	AS
2-2-3	PSPAZA064WJ00	J	Fan Spacer	AD
2-3	DBDYUA011WJ01	J	Bottom Body Ass'y(XV-Z90E)	BQ
2-3	DBDYUA027WJ01	J	Bottom Body Ass'y(XV-Z91E)	BR
2-3-1	*Not Available*	-	Bottom Body	—
2-3-2	GCOVAA080WJKA	J	Panel Dec.(L)	AH
2-3-3	GCOVAA081WJKA	J	Panel Dec.(R)	AH
2-3-4	GCOVAA086WJKA	J	LED Guide	AG
2-3-5	GCOVAA090WJKA	J	R/C Cover (Front)	AG
2-3-6	GCOVAA091WJKA	J	R/C Cover (Rear)	AK
2-3-7	HiNDPA230WJZZ	J	Lamp Caution Label	AM
2-3-8	HiNDPA232WJZZ	J	Label	AM
2-3-9	PMLT-A054WJZZ	J	Molt for Bottom	AH
2-3-10	LANGF2134CEFW	J	K Lock	AE
2-3-11	HPNC-A009WJ00	J	Ballast Punching	AD
2-3-12	HiNDPA234WJSA	J	Terminal Label	AF
2-4	GCOVAA381WJKA	J	Lens Cover (Bottom)	AT
2-5	LX-BZ3266CEFD	J	Screw	AA
2-6	PSLDMA050WJFW	J	Bottom Shield (L)	AH
2-7	PSLDMA051WJFW	J	Bottom Shield R)	AH
2-8	PZETKA011WJKZ	J	Base	AL
2-9	QEARBA003WJFW	J	Earth	AF
2-10	RH-HZ0091CEZZ	J	Thermistor	AL
3	CCOVAA165WJ01	J	Side Cover (L) Ass'y	BE
3-1	*Not Available*	-	Side Cover (L)	—
3-2	HPNC-A007WJ00	J	Punching (L)	AL
3-3	LX-NZ3172CEFJ	J	Speed Nut	AD
3-4	PDUC-A007WJKZ	J	Vent Duct (L)	AW
4	CCOVAA166WJ01	J	Side Cover (R) Ass'y	BE
4-1	*Not Available*	-	Side Cover (R)	—
4-2	HPNC-A006WJ00	J	Punching (L)	AL
4-3	LX-NZ3172CEFJ	J	Speed Nut	AD
4-4	PDUC-A006WJKZ	J	Vent Duct (R)	AW
5	CHLDZA070WJ01	J	Lens Shutter Ass'y	AK
5-1	*Not Available*	-	Lens Shutter	—
5-2	PSPAZA057WJ00	J	Lens Cover	AF
6	Refer to Optics Mechanism Parts			—
7	CCAPHA004WJ01	J	Lens cap	AG
8	CDUC-A008WJ01	J	Exhaust Fan Ass'y	BC
8-1	*Not Available*	-	Exhaust Duct (Top)	—
8-2	PDUC-A009WJKZ	J	Exhaust Duct (Bottom)	AP
8-3	NFANRA007WJ00	J	Ballast Fan	AT
8-4	NFANRA006WJ00	J	Exshaust Fan	AV
8-5	PSPAZA063WJ00	J	Ballast Fan Spacer	AD
8-6	PSPAZA065WJ00	J	Exhaust Fan Spacer	AD
8-7	XEPSD30P10000	J	Screw (M3 x 10)	AA
9	CHLDZA048WJ03	J	Blower Fan Ass'y	BC
9-1	*Not Available*	-	Blower Fan Holder	—
9-2	PDUC-A010WJKZ	J	Blower Fan Duct	AH
9-3	NFANSA004WJ00	J	Blower Fan	AX
9-4	PSPAGA039WJKZ	J	Fan Spacer A	AB
9-5	PSPAGA040WJKZ	J	Fan Spacer B	AB
9-6	PSPAT0074CEZZ	J	Tefron Tape	AC
10	CHLDZA114WJ01	J	DMD Mounting Plate Ass'y	AU
11	PRDARA016WJZZ	J	DMD Radiator	AE
12	LHLDZ0140CEKZ	J	Outer Frame	AE
13	RDMDPA005WJZZQ	J	DMD	**
14	QSOCZA038WJZZ	J	C-Spring	BC
15	XBPSD30P12JS0	J	Screw (M3 x 12)	AA
16	XBPSD30P08KS0	J	Screw (M3 x 8)	AA
17	PSLDHA012WJFW	J	Lamp Shield	AB
18	LHLDZ0142CEKZ	J	Bimetal Holder	AF
19	RBIM-A002WJZZ	J	Bimetal	AK
20	XEBSD30P06000	J	Screw (M3 x 6)	AA
21	XEBSD26P08000	J	Screw (M2.6 x 8)	AA
22	UBNDT0013CEZZ	J	Lens Cap Strap	AF
23	GDAI-A017WJSA	J	Tilt Top Table	BH
24	JKNBZA006WJKA	J	Lens Shift Knob	AS
25	DUNTKB226FE04	-	Main PWB Unit	—
26	DUNTKE269DE02	-	Formatter PWB Unit	—
27	DUNTKB313DE02	-	Terminal 1 PWB Unit	—
28	DUNTKB314DE02	-	Terminal 2 PWB Unit	—
29	DUNTKB315DE02	-	LED PWB Unit	—
30	DUNTKB227DE02	-	KEY PWB Unit	—
31	DUNTKB351DE02	-	Front R/C PWB Unit	—
32	DUNTKB352DE02	-	Rear R/C PWB Unit	—
33	RDENCA018WJZZ	-	Power Unit	—
34	RDENCA019WJZZ	J	Ballast Unit	BX
35	QCNW-A667WJZZ	J	Connecting Wire (KY)	AH
36	QCNW-A670WJZZ	J	Connecting Wire (TC)	AM
37	QCNW-A671WJZZ	J	Connecting Wire (TD)	AG
38	QCNW-A672WJZZ	J	Connecting Wire (ED)	AL
39	QCNW-A678WJZZ	J	Connecting Wire (BA)	AG
40	QCNW-A676WJZZ	J	Connecting Wire (RB)	AE
41	QCNW-A679WJZZ	J	Connecting Wire (EC)	AG
42	QCNW-A681WJZZ	J	Connecting Wire (Bimetal)	AD
43	QCNW-A680WJZZ	J	Connecting Wire (EA)	AQ
44	QPWBHB482WJZZ	J	FPC (Main-Formatter)	AS
45	QCNW-A677WJZZ	J	Connecting Wire (PG)	AL
46	QCNW-A669WJZZ	J	Connecting Wire (RA)	AE
47	QCNW-A682WJZZ	J	Connecting Wire (DB)	AE
48	PSHEPA058WJZZ	J	Covering Sheet	AF
49	LHLDW1220CEZZ	J	Power Holder	AD
50	LHLDW1060CEZZ	J	Wire Holder	AB
51	LHLDW1003GEZZ	J	Wire Holder	AA
52	LHLDW1064CEZZ	J	Wire Holder	AB
53	QEARBA004WJFW	J	Earth	AH
54	PZETKA008WJKZ	J	Power Insulation Sheet	AN
56	PSLDMA029WJFW	J	Power Shield	AT
55	PZETKA007WJKZ	J	Ballast Cover	AM
59	HPNLHA001WJK1	J	Terminal Panel (L)	AP
61	PSLDMA031WJFW	J	Terminal Shield B	AF
63	HPNLHA002WJK4	J	Terminal Panel (R)	AP
64	LHLDZ0141CEKZ	J	Backer Plate	AA
65	PRDAR0113CEFW	J	Plate	AM
66	LX-EZA004WJFD	J	Screw	AA
67	XEPSD30P08000	J	Screw (M3 x8)	AA
68	NSFTZ0135CEFW	J	Shaft	AD
69	XEBSN30P10000	J	Screw	AA
70	XBBSN30P08000	J	Screw	AA
71	XBPSD30P06R00	J	Screw	AB
72	XBPSD26P06JS0	J	Screw (M2.6 x6)	AA
73	XBPSD30P06000	J	Screw	AA
74	PZETKA010WJKZ	J	Cover	AG
76	PSLDMA171WJZZ	J	Shield Sheet	AE
77	PSLDMA184WJZZ	J	Gasket	
79	CSLDMA160WJ01	J	Formatter Shield Unit	
80	PSLDMA052WJ01	J	Terminal Shield (L)	
81	PSLDMA049WJFW	J	Terminal Shield (R)	AF
82	PCOVPA010WJZZ	J	Bottom Cover x 3	AB

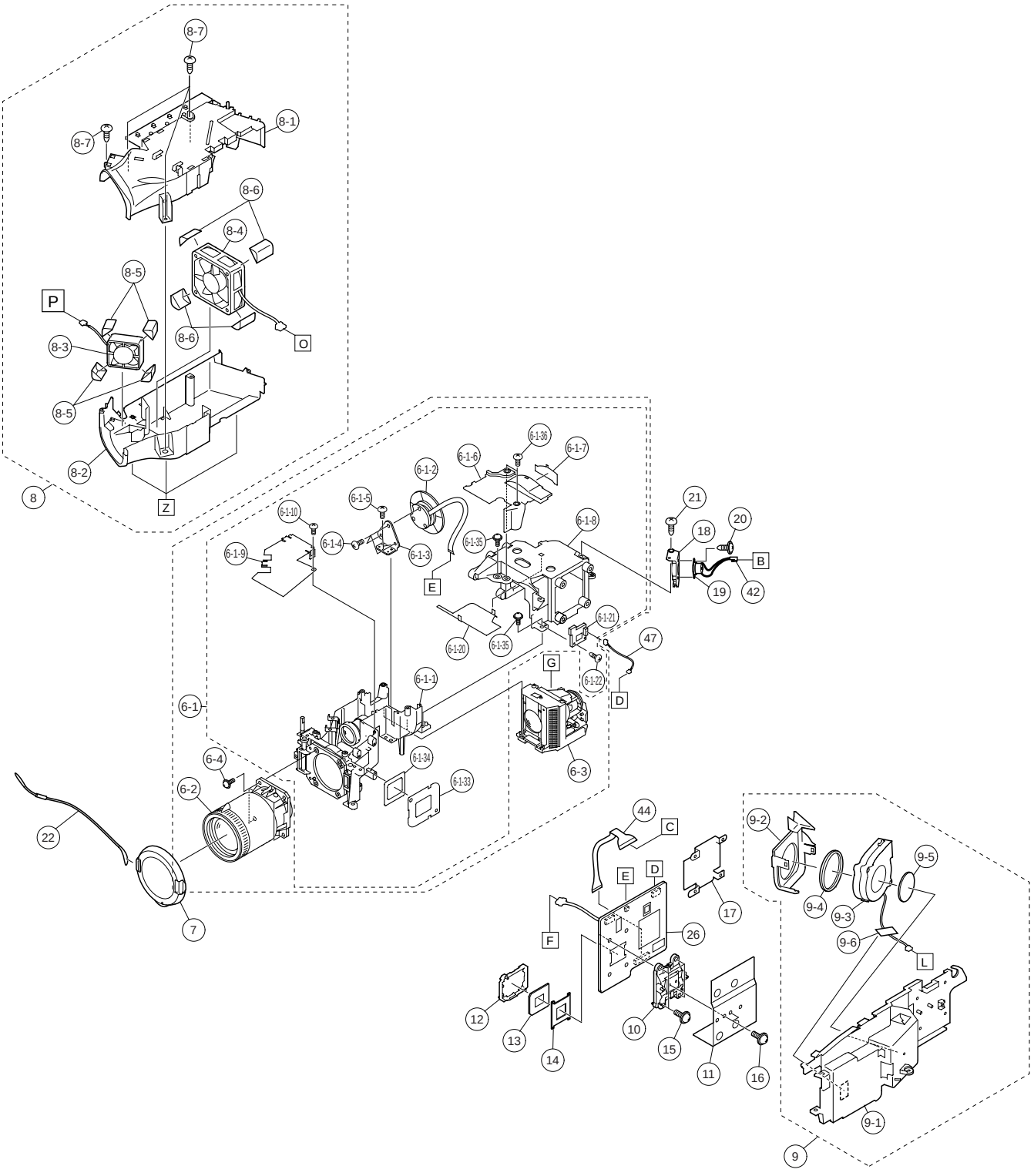
CABINET AND MECHANICAL PARTS



OPTICS MECHANISM PARTS

Ref. No.	Part No.	★	Description	Code
6	*Not Available*	-	Optic Engine Ass'y	—
6-1	CCHSKA003WJ01	J	Optic Engine Unit (XV-Z90E)	DA
6-1	CCHSKA003WJ02	J	Optic Engine Unit (XV-Z91E)	DB
6-1-1	95USA740A-2	J	Unit Base (XV-Z90E)	BA
6-1-1	95USA740A-1	J	Unit Base (XV-Z91E)	BA
6-1-2	95U29A1018678	J	Color Wheel	CD
6-1-3	95U41B1018017	J	Support	AK
6-1-4	95U110M200353M	J	Screw (M2 x 3.5)	AD
6-1-5	XBBSF26P06000	J	Screw (M2.6 x 6)	AA
6-1-6	95U11B1018812	J	Color Wheel Cover	AK
6-1-7	95U49B1019446	J	Color Wheel Insulation Plate	AG
6-1-8	95U12B1018810	J	Lamp Box	AZ
6-1-9	95U11B1018897	J	Shield (Top)	AG
6-1-10	XBBSF20P05000	J	Screw (M2 x5)	AA
6-1-11	LX-BZ3266CEFD	J	Screw x2	AA
6-1-12	PSLDMA160WJFW	J	Formatter Shield	AG
6-1-20	95U72B1018837	J	Shield(Upper)	AG
6-1-21	95U110A1018253	J	Sensor PWB Ass'y	AU
6-1-22	95U53K108340	J	Sensor PWB Fixing Screw	AD
6-1-33	95U27B1018652	J	DMD Mask	AL
6-1-34	95U60B1018653	J	DMD Packing	AK
6-1-35	XBPSD30P06WS0	J	Screw (M3 x 6)	AA
6-1-36	XBBSF26P06000	J	Screw (M2,6 x 6)	AA
6-2	PLNS-A013WJZZ	J	Projection Lens (XV-Z90E)	CC
6-2	PLNS-A014WJZZ	J	Projection Lens (XV-Z91E)	CD
⚠ 6-3	BQC-XVZ90+++1	J	Lamp Case Ass'y	CQ
6-4	95U280M30107K	J	Screw (M3 x 10)	AD

OPTICS MECHANISM PARTS



1	2	3	4	5	6

Ref. No.	Part No.	★	Description	Code

SUPPLIED ACCESSORIES

(XV-Z90E)

	GCOVAA116WJKA	J	Terminal Cover	AP
	XBBSN40P10000	J	Screw for Terminal Cover	AB
	SSAKAA006WJZZ	J	Polystylene Bag	AC
⚠	QACCV4002CEZZ	J	AC Cord (Europe except U.K.)	AZ
⚠	QACCBA012WJPZ	J	AC Cord (U.K./Hong Kong/ Singapore)	AX
⚠	QACCL3022CEZZ	J	AC Cord (Australia/ New Zealand)	AZ
	RRMCGA099WJSA	J	Infrared R/C Unit	BB
	TCADEA016WJZZ	J	Questionnaries Card	AF
	TCADH1018CEZZ	J	Guarrantee Card	AE
	TINS-A326WJZZ	J	Operation Manual (European 7 Languages)	BD
	TINS-A327WJZZ	J	Operation Manual (Chinese/ Korean/Arabic)	AY

(XV-Z91E)

	GCOVAA116WJKA	J	Terminal Cover	AP
	XBBSN40P10000	J	Screw for Terminal Cover	AB
	SSAKAA006WJZZ	J	Polystylene Bag	AC
⚠	QACCV4002CEZZ	J	AC Cord (Europe except U.K.)	AZ
⚠	QACCBA012WJPZ	J	AC Cord (U.K./Hong Kong/ Singapore)	AX
⚠	QACCL3022CEZZ	J	AC Cord (Australia/ New Zealand)	AZ
	RRMCGA099WJSA	J	Infrared R/C Unit	BB
	TCADH1018CEZZ	J	Guarrantee Card	AE
	TINS-A645WJZZ	J	Operation Manual (European 7 Languages)	
	TINS-A646WJZZ	J	Operation Manual (Chinese/ Korean/Arabic)	

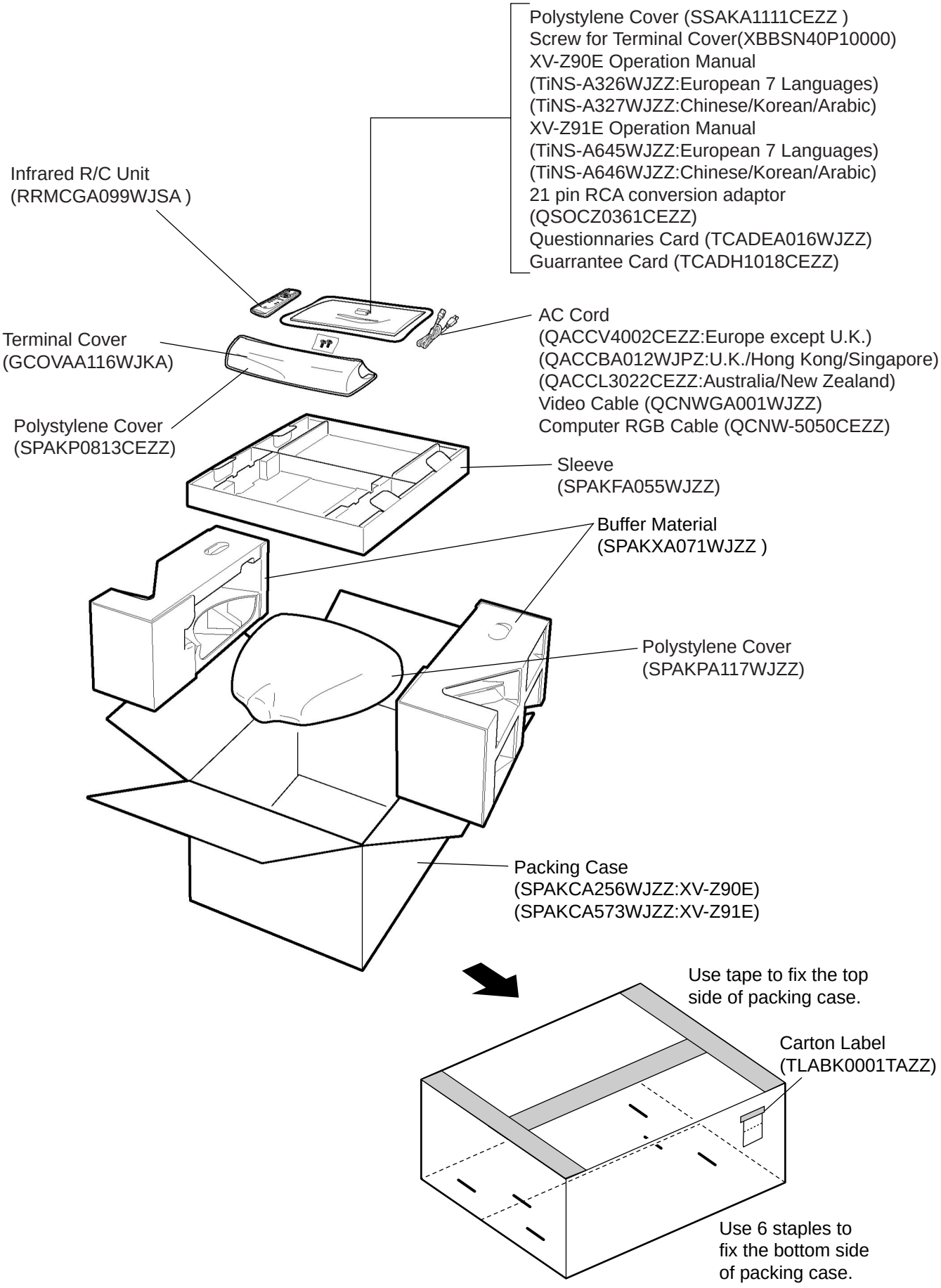
PACKING PARTS
(NOT REPLACEMENT ITEM)

	SPAKCA256WJZZ	-	Packing Cace (XV-Z90E)	—
	SPAKCA573WJZZ	-	Packing Cace (XV-Z91E)	—
	SPAKFA055WJZZ	-	Sleeve	—
	SPAKPA117WJZZ	-	Polystylene Cover	—
	SPAKXA071WJZZ	-	Buffer Material	—
	SSAKA1111CEZZ	-	Polystylene Cover, for Accessories	—
	TLABK0001TAZZ	-	Carton Label	—

SERVICE JIGS
(Use for servicing)

	QCNW-A760WJZZ	J	Extension Cable 30-pin MAIN-POWER	BE

PACKING OF THE SET



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TQ1471-S
Jan. 2003 Printed in Japan
In Japan gedruckt

Design and Production Information
Design : Japan
Production : Japan

SY. DS

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Quality & Reliability Control Center
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